

AUTHOR INDEX

VOLUME 27

- Ablashi, D. V., 988
 Abrahams, E. W., 1164
 Adams, D. M., 281, 797
 Adams, J. C., 290
 Addison, J. Bruce, 703
 Ades, G. L., 425
 Agarwal, S. C., 997
 Akin, Danny E., 1149
 Akin, Elmer W., 506, 1177
 Alderton, Gordon, 613
 Alexander, E. Russell, 912
 Allerhand, Jona, 858
 Anderson, David W., Jr., 5
 Anderson, N., 407
 Anellis, Abe, 784
 Anger, Claude B., 5
 Araki, Emiko, 953
 Arguedas G., Jorge, 802
 Armstrong, G. R., 988
 Armstrong, John H., 802
 Asnani, P. J., 997
 Attebery, Howard R., 274
 Ayres, J. C., 337, 427
- Balandreau, J. P., 662
 Balows, A., 575
 Bandyopadhyay, Alok K. 224
 Bannatyne, Robert M., 1067
 Barach, J. T., 281
 Barry, Arthur L., 562, 603
 Batty, E. M., 272
 Beachey, Edwin H., 1
 Benedict, C. D., 292
 Benton, William H., 1177
 Benton, William H., 506
 Bergdoll, Merlin S., 83
 Beuchat, L. R., 1075
 Bhat, S. G., 43
 Bisno, Alan, 1
 Bissonnette, Gary K., 823
 Blacklock, Zeta M., 1164
 Blasi, Dianna, 420, 1167
 Blazevec, Donna J., 537
 Blumer, Sharon, 620
 Bogert, A. B., 1175
 Bohlool, B. B., 124
 Bollag, Jean-Marc, 674
 Bonev, Stefan I., 464
 Bott, Thomas L., 870
 Bottone, Edward J., 858
 Boulette, R. F., 814
 Bowen, V. G., 605
 Boykin, Elizabeth H., 949
 Bradley, Dorothy G., 130
 Bradshaw, Joe G., 657
 Brandsberg, J. W., 566
 Bricknell, Kenneth S., 274
- Brisou, J., 819
 Brodsky, M. H., 938
 Brooks, Karen, 1023
 Brown, J., 890
 Browne, William J., 811
 Brown, W. Jerry, 1027
 Brunker, Richard L., 870
 Burdick, Donald, 1149
 Burnison, B. Kent, 488
- Cabasso, V. J., 553
 Caldwell, Daniel R., 549
 Callihan, C. D., 159
 Campbell, J. N., 93
 Campbell, L. Leon, 232
 Cargile, Nancy L., 991
 Carlson, J. R., 540
 Casida, L. E., Jr., 432
 Cerini, Costantino P., 763
 Cerveny, John G., 605
 Chao, J., 407
 Charache, Patricia, 351
 Chassis, G., 337
 Chen, John K., 613
 Chen, Marianne, 351
 Chen, Norman C., 192
 Chester, Brent, 858
 Chibata, Ichiro, 531, 688, 878, 886
 Chippis, Donna D., 420, 1167
 Christiansen, L. N., 733
 Chu, Fred C., 1105
 Chun, Doki, 1124
 Chung, Jae Kyu, 1124
 Clark, Grace McConnell, 8
 Clifford, Walter J., 784
 Cobet, A. B., 172
 Cockey, Ralph R., 629
 Cole, Francis E., Jr., 150
 Cole, R. J., 394
 Coleman, R. N., 93
 Colewell, W. M., 218
 Colwell, R. R., 285, 1053
 Conaway, Donna, 83
 Cook, F. D., 93, 166
 Cooney, Charles L., 1112
 Coote, G. G., 648
 Cory, J., 1157
 Courtois, D., 819
 Cowart, Glenda, 620
 Cowman, R. A., 86
 Cox, Marilyn F., 622
 Coyle, Janice E., 1081
 Crawford, James J., 927
 Crumrine, Martin H., 297
 Cunningham, Madeleine, 1
 Cunningham, Thomas C., 297
- Dahlgren, Bonnie J., 141, 197
 Danielsson, Dan, 368
 Darland, Gary, 54
 DasGupta, B. R., 333
 Daugharty, Harry, 756
 Davis, Betty R., 54
 Dawson, David J., 1164
 Dayton, Sandra L., 420, 1167
 Dazzo, Frank B., 1172
 De Flora, Silvio, 901
 Deibel, R. H., 605
 de Jong, J. C., 59
 Denis, F., 819
 Dever, Stanley M., 806
 Dhillon, Elvera K. S., 640
 Dhillon, T. S., 640
 DiSalvo, L. H., 172
 Doane, F. W., 407
 Dobkin, M. B., 553
 Dodgson, K. S., 154
 Doetsch, R. N., 283
 Dommergues, Y. R., 662
 Douglas, Anne V., 763
 Dowell, V. R., Jr., 1098
 Dunican, Kieran, 983
 du Pasquier, P., 878
 Dutta, G. C., 634
- Eddy, Gerald A., 150
 Eklund, M. W., 251
 El Kholy, Aziz, 748
 Elliker, P. R., 72
 Ellison, Neal, 1014
 Ellison, Robert A., 423
 Emborg, Claus, 830
 Erickson, Robert J., 600
 Eveland, Warren C., 144
- Facklam, R. R., 107
 Fairchilds, I. G., 678
 Farkas, J., 202
 Farmer, J. J., III, 288
 Farmer, John J., III, 400
 Farrell, Evelyn, 983
 Farshy, David C., 11, 300
 Faur, Yvonne C., 1041
 Fay, Gunnar D., 562, 603
 Feeley, John C., 1005
 Fennell, D. I., 1118
 Fields, N. D., 517, 706
 Finegold, Sydney M., 274
 Firmin, A. C., 848
 Fischer, Gerald W., 297
 Fitzgerald, J. W., 154
 Fitzgerald, R. J., 86
 Fitzgerald, Sandra C., 440
 Fliermans, C. B., 124

- Fogarty, William M., 346
 Francis, David W., 657
 Francis, D. W., 1127
 Frey, M. L., 1170
 Frickey, Paul H., 763
 Fuccillo, David A., 440

 Gaafar, Hassan A., 192
 Gabis, D. A., 66
 Gales, Peter W., 753
 Gard, G. P., 272
 Gentchev, P., 464
 Gilardi, Gerald L., 288
 Gilliland, S. E., 738, 793
 Gilmour, Marion N., 1134
 Glassman, Lawrence H., 584
 Glover, Donald J., 513
 Goede, Ron W., 593
 Goldberg, I. D., 278
 Goodheart, C. R., 988
 Goodman, David, 206
 Goss, W. A., 264
 Gratzek, J. B., 890
 Graves, Michael H., 1131
 Greaves, H., 609
 Green, Richard L., 475
 Griffin, H. L., 1061
 Griffith, D. W., 527
 Grigsby, R. D., 394
 Guhathakurta, Bhakti, 634

 Hafez, Khalil, 748
 Hall, Joan M., 896
 Hall, Marsha, 187, 699
 Hammar, A. H., 553
 Han, Y. W., 159
 Hang, Y. D., 807
 Hanson, L. E., 268
 Hara, S., 1118
 Harmsen, M., 59
 Harnett, Norma, 1067
 Harris, Philip, 618
 Hart, E., 278
 Hasty, Sherman E., 777
 Hatch, Milford H., 756
 Hauschild, A. H. W., 78, 521, 527
 Healy, George R., 11
 Hebert, G. Ann, 389, 862
 Heckly, Robert J., 513
 Hein, H., Jr., 394
 Held, Hans R., 1085
 Hercher, H. J., 500
 Hernandez C., Guillerme, 763
 Herring, C. M., 517, 566
 Hesseltine, C. W., 906, 1118
 Hill, Ira D., 1070
 Hill, William F., Jr., 506, 1177
 Hilsheimer, R., 78, 521, 527
 Hipp, Sally S., 192
 Hoadley, A. W., 848
 Hodge, Howard M., 224
 Hoffsommer, John C., 513
 Hofmann, R. R., 713

 Holdeman, Lillian V., 961
 Holm, Harvey W., 622
 Howard, Lawrence, 102
 Hu, L. Y., 653
 Hudson, Richard F., 549
 Hufham, James B., 771
 Huhtanen, C. N., 724
 Hungate, R. E., 713
 Hunt, Christina M., 432

 Iandolo, John J., 317
 Ichishima, Eiji, 953
 Incze, K., 202
 Inglett, G. E., 1061
 Inhorn, Stanley L., 767
 Isenberg, Henry D., 575
 Ishii, Kenji, 625
 Ito, Keith A., 613

 Jackson, W. Bruce, 896
 Jakubowski, Walter, 1177
 Jarnagin, Jerald L., 448
 Jarvis, B. D. W., 933
 Jeffries, Charles D., 47
 Jennings, Paul B., 297
 Jezeski, James J., 823
 Jobson, A., 166
 Johnston, R. W., 733
 Jones, Gilda L., 806
 Jones, Lois F., 288
 Jones, Lois Faye, 400
 Jones, Wallis L., 1005
 Juni, Elliot, 16

 Kafkewitz, David, 206
 Kakimoto, Toshio, 688
 Kaltenbach, C. M., 437
 Kamekura, Masahiro, 809
 Kaminski, E., 1001
 Kaplan, W., 496
 Karanth, N. G. K., 43
 Kasatiya, S. S., 838
 Kato, Jyoji, 531
 Kaufman, Leo, 620
 Kautter, D. A., 733
 Kelley, Lee M., 443
 Kemp, W. M., 848
 Kenard, R. P., 484
 Keogh, Barbara P., 411
 Keys, Reginald J., 416
 Kiesel, G. K., 114
 King, A. Douglas, Jr., 671
 King, Norval W., 102
 King, Ronald C., 927
 Kinner, J. A., 118, 844
 Kirk, T. Kent, 360
 Klein, Donald A., 429
 Klein, Frederick, 224
 Kleven, S. H., 890
 Koburger, J. A., 666, 1108
 Koburger, John A., 435
 Kocka, Frank E., 1131
 Koehler, P. E., 337, 427
 Kolari, O. J., 733

 Korzeniowski, Myroslawa, 480
 Kotsonis, Frank N., 423
 Kraidman, Gary, 1070
 Kraus, Stephen J., 475, 584, 1014
 Krause, Richard M., 748
 Kronvall, Göran, 368
 Kubica, George P., 917
 Kueper, T. V., 733
 Kuyper, Sjoukje, 834
 Kwan, P. L., 329

 Labeda, D. P., 432
 Lacy, George H., 379
 Lam, Gow T., 356
 Lambert, N. G., 838
 Landi, Silvio, 1085
 Landschoot, R. L., 807
 Lange, Charles F., 28
 Lanzilotta, Raymond P., 130
 Lapin, R. M., 666
 Larsen, Sandra A., 1005
 Larson, Steven M., 351
 Laurence, R. A., 838
 Lawton, William D., 192
 Lazarus, Charles R., 435
 Lazarus, C. R., 1108
 Lee, J. S., 329
 Lehmkuhl, H. D., 1170
 Lim, Sook Kyung, 144
 Littlejohn, Dewitt C., 1105
 Lomniczi, B., 1162
 Lorenz, L. F., 360
 Lotter, Leonard, 713
 Low, Iolanda E., 1046
 Lowrie, R. J., 210

 McChesney, James D., 991
 McConville, John F., 5
 McDonald, Kerry M., 130
 McElligott, James J., Jr., 38
 McFeters, Gordon A., 823
 McGrath, M. B., 264
 McLaughlin, M., 166
 McTernan, W. F., 290
 Maddox, S. E., Jr., 844
 Mahloch, Jerome L., 340
 Mallette, M. F., 457
 Maloiy, Geoffrey, 713
 Malowany, Moises S., 858
 Mandegere, U., 278
 Mandle, Robert J., 303
 Mangiafico, Joseph A., 25
 Manservigi, Roberto, 1034
 Marchand, A., 874
 Marshall, Betty J., 648
 Marth, E. H., 452
 Martin, John E., 802
 Martins, Ronald R., 753
 Massey, Eugene D., 25
 Matsen, John M., 537
 May, Paul S., 1041
 May, Stephen W., 150
 Mayhew, Charles J., 506
 Mayhew, Charles J., 1177

- Mehta, Aruna, 28
 Meibos, H., 1157
 Melnick, Joseph L., 920
 Mestrandrea, Leonard W., 1017
 Metcalf, Theodore G., 506, 920
 Michaels, Gene E., 1149
 Michaud, R. N., 264
 Michener, H. David, 671
 Mihályi, Vilma, 202
 Miller, Terry L., 985
 Millier, C. R., 662
 Mills, Dallice, 944
 Mills, Stacey M., 612
 Moats, W. A., 118, 844
 Moder, Flora, 440
 Mohr, H. K., 324
 Moore, W. E. C., 961
 Morello, Josephine A., 1131
 Mori, Takao, 886
 Moriarty, John D., 927
 Morita, Richard Y., 488
 Morris, George K., 8, 312
 Morton, Harry E., 356
 Moss, C. Wayne, 437, 570
 Mukherjee, Barid B., 1070
 Muldoon, Patrick J., 995
 Munson, Terry E., 262
 Murphy, Judith A., 232
 Muse, K. E., 218
- Nabe, Koichi, 688
 Nash, Cheryl L., 674
 Nelson, Donald B., 767
 Nelson, F. Eugene, 443
 Nelson, Stuart L., 703
 Nishimura, Noriyuki, 688
 Nixon, M. C., 938
 Noonan, A., 407
 Nyiendo, J., 72
- O'Connor, G. Richard, 896
 Ofek, Itzhak, 1
 Ohishi, I., 333
 Ohwaki, Kyoko, 713
 Onishi, Hiroshi, 809
 Oobayashi, Akira, 953
 Ordal, Z. John, 607
 Orenstein, Neil S., 102
 Ormsbee, R. A., 1157
 Orr, Henry C., 1105
 Orr, T. W., 988
 Owens, Dwight R., 703
 Oxborrow, G. S., 517, 566, 706
- Padula, J. F., 107
 Painter, Barbara G., 575
 Palumbo, S. A., 724
 Pappelis, A. J., 232
 Pariza, Michael W., 317
 Payne, S. L., 425
 Payne, W. J., 154
 Peacock, M., 1157
 Pearce, L. E., 933
 Pearson, G., 988
- Peeler, J. T., 1127
 Pemberton, John R., 1094
 Perrella, M. M., 86
 Petricciani, John C., 1105
 Piaud, J. J., 874
 Pierson, M. D., 425
 Pollock, Helen M., 141, 197
 Porschen, Richard K., 744, 1031
 Porter, Richard J., 144
 Postic, Bosko, 38
 Poyesky, F. T., 251
 Probst, Peter G., 1105
 Provonchee, Richard B., 185
 Puleo, J. R., 517, 566, 706
- Quirin, Edward P., 767
- Rechard, P. A., 290
 Reiser, Raoul, 83
 Rhoden, D. L., 575
 Richards, William D., 448
 Rihs, John D., 38
 Ris, D. R., 270
 Roark, A. L., 706
 Robinson, David M., 777
 Robinson, Orson R., Jr., 224
 Robohm, Richard A., 179, 259
 Roby, R. E., 553
 Rodas, C. U., 695
 Ronald, A. R., 695
 Ross, E. W., Jr., 784
 Rossi, C. R., 114
 Rothwell, Donald F., 1172
- Saba, Helen M., 272
 Salanitro, J. P., 678
 Samuels, S. B., 570
 Sandine, W. E., 72
 Sato, Tadashi, 878, 886
 Sawano, Megumi, 625
 Scales, Roy W., 475
 Schelhorn, P., 848
 Schmidt, E. L., 124
 Schmidt, William C., 47
 Schneider, W. R., 283
 Schriфт, A., 814
 Schroeder, H. W., 394
 Sconyers, B. J., 107
 Sconyers, J. R., 927
 Scott, T. A., 890
 Scott, W. J., 648
 Seidler, Ramon J., 72
 Seol, Sung Yong, 1124
 Sever, John L., 440
 Shaparis, A. S., 733
 Shibatani, Takeji, 688
 Shibley, George P., 224
 Shih, C. N., 452
 Shimmin, P. D., 411
 Shortridge, K. F., 653
 Siddiqui, A., 278
 Silliker, J. H., 66
 Simmons, D. G., 218
- Skipper, N. A., 933
 Slifkin, M., 500
 Sloneker, J. H., 1061
 Smaron, Mary F., 469
 Smith, D. K., 292
 Smith, G. T., 848
 Smith, Harry L., Jr., 375
 Smith, J. L., 724
 Smith, Kendall O., 616
 Smith, Merton V., II, 995
 Smith, P. B., 575, 802
 Smith, Peter R., 983
 Smith, R. F., 420, 1167
 Smittle, R. B., 738
 Smolka, Lawrence R., 443
 Snedecor, Bradley, 1112
 Sodeman, Thomas, 1023
 Sonntag, Sandra, 1031
 Sørhaug, Terje, 607
 Spaulding, Earle H., 480, 744
 Speck, M. L., 738, 793
 Spendlove, Rex S., 593
 Splittstoesser, D. F., 807
 Stalons, Don R., 1098
 Stawicki, S., 1001
 Stemper, Joanne E., 537
 Stine, Amy, 620
 Stinnett, J. D., 288
 Stoner, Glenn E., 949
 Stozek, S. K., 276
 Straus, David C., 28
 Stuart, David G., 823
 Sudman, M. S., 496
 Sugawara, Shuichi, 953
 Sugihara, Paul T., 274
 Sugiyama, H., 333
 Sutter, Vera L., 274
 Swatek, Frank E., 379
- Tallent, G., 1157
 Tanabe, Osamu, 953
 Tanguay, A. E., 1175
 Tatro, Mahlon C., 629
 Taylor, George S., Jr., 416
 Thacker, L. G., 107
 Thoen, Charles O., 448
 Thomas, E. T., 288
 Thomas, Evan T., 400
 Thomason, Berenice M., 418, 862
 Thomson, Carole A., 823
 Thornsberry, Clyde, 1098
 Tomfohrde, Karla, 575
 Tompkin, R. B., 276, 733
 Tosa, Tetsuya, 878, 886
 Trenk, H. L., 324
 Tripathy, D. N., 268
 Trouwborst, T., 59, 834
 Tseng, Men C., 1085
 Tsunoda, Hiroshi, 625
 Tu, Kuen-Ching, 593
 Turner, Gwendolyn, 1134
 Twedt, R. M., 1127
 Twedt, Robert M., 657

- Uchida, Tomofumi, 531
Ueno, Yoshio, 625
- Vaidyanathan, C. S., 43
Valentine, R. S., 484
Vargo, Valerie, 480
Vasantharajan, V. N., 43
Vespa, Janet B., 906
Vice, John L., 469
Vickers, Richard M., 38
Vitvitsky, Jack, 917
Vogt, Peter K., 618
von Hofsten, Angelica, 1142
von Hofsten, Bengt, 1142
- Wade, Thomas J., 303
Wagner, Henry N., Jr., 351
Walker, J. D., 285, 1053
Walker, William E., 753
Wallis, Craig, 920
Walter, W. M., Jr., 738
- Wang, Hwa L., 906
Ward, Owen P., 346
Warren, Edward, 187, 699
Washington, John A., 11, 187, 699
Wasowicz, E., 1001
Watanabe, Taizo, 531
Weinberg, E. D., 292
Weisburd, Martin H., 1041
Wells, Joy G., 8, 312
Wentworth, Bertina B., 912
West, Jeffrey F., 927
Westhoff, Dennis C., 294
Westlake, D. W. S., 93, 166
Wilkins, Judd R., 135, 612, 949
Wilson, Marion E., 1041
Winkler, K. C., 59
Wodzinski, Richard S., 1081
Wolin, M. J., 985
Won, William D., 513
Wood, Ross, 620
- Woodward, Paul W., 1094
Wooley, R. E., 890
Wortham, E. C., 107
Wu, M. T., 337, 427
Wu, Shenyuh, 429
- Yeterian, M., 324
Yokoyama, M. T., 540
Yokoyama, Sadaji, 953
Young, Frank E., 600
Young, Ruth G., 756
Yunker, C. E., 1157
- Zachary, Arthur, 980
Zakanycz, J. P., 400
Zakhariev, Zakhari, 464
Zgornicki, Y. D., 678
Ziegler, Donald W., 756
Zinner, Stephen H., 185
Zukál, E., 202

SUBJECT INDEX

VOLUME 27

- Acholeplasma laidlawii*
isolation from serum-free tissue culture medium, 1046
- Achromobacter liquidum*
urocanic acid, enzymatic production, 688
- Acidaminococcus fermentans*
isolation from human feces, 274
- Acid brine
G. candidum, propagation, 807
- Acid protease production
soybean food fermentation, 906
- Acinetobacter* (Mima and Herellea)
transformation test for identification, 1023
- Aerobic plate counts
anhydrous cosmetics, 5
- Aerosols
encephalomyocarditis virus, inactivation, 59
- Aflatoxin production
inhibition from treatment with dichlorvos, 394
- Agar screening
alternative procedure, 294
- 4-Alkoxy groups
oxygenation by *P. dichrous*, 360
- Amebiasis
indirect micro hemagglutination test, 11
- Amino acid requirements, *S. mutans*
influence of incubation atmosphere, 86
- Amino acid uptake
in a eutrophic lake, 488
- Ammonium sulfate fractionation of sera, 389
- Anaerobic bacteria, growth
culture medium and CO₂ concentration, effect, 1098
- Anaerobic bacteria, identification
paper chromatography, 500
- Anaerobic cocci
sodium polyanethol sulfonate sensitivity, 1131
- Anaerobic glove box
gas leaks, detection, 806
- Anaerobic organisms
phosphatase activity, 744
- Anaerobic tube culture techniques
human fecal flora, 961
- Anhydrous cosmetics
aerobic plate counts, using Tween 60 and Arlcel 80, 5
- Antibody detection system
Newcastle disease virus, 890
polycarbonate membrane radioimmunoassay, 475
- Antibody responses in rabbits
injections of vibrios, 375
- Antigenic relationship
American and African isolates, *B. dermatitidis*, 496
- Ascospores, heat-resistance
Bysschlamys asci, 671
- L-Asparaginase production
V. succinogenes, 206
- Aspartase-containing microbial cells
enzymatic properties, 882
- L-Aspartic acid production
immobilized *E. coli* cells, 878
- Aspergillus flavus*
aflatoxin-producing strains, 1118
- Aspergillus parasiticus*
synthesis of lipid and aflatoxin, 452
- Aspergillus wentii*
production of toxic metabolite, 337
- Atomic absorption spectrophotometry
analysis of mercurial preservatives in biologicals, 1094
- Attenuated TC-83 strain virus
Venezuelan equine encephalitis vaccine, preparation, 150
- Au Ag-Ab radioimmunoassay
standard antibody with Australia antigens, interaction, 756
- Australia antigens
interaction with standard antibody, 756
- Avian mycoplasma species
serotyping, 997
- Bacillus* strain, halophilic
protease formation, 809
- Bacillus subtilis*
polygalacturonate lyase production, 346
- Bacillus subtilis* (var. *amyloliquefaciens*)
virulent bacteriophage, characterization, 600
- Bacitracin screening technique
streptococcal groups, distribution, 141
- Bacon
C. botulinum, toxin production, 733
- Bacteremia
detection with media containing sodium polyanetholsulfonate, 187
- Bacteremia after tooth extractions
prereduced anaerobically sterilized culture media, 927
- Bacteremia in neonates
radiometric detection, 1067
- Bacteria
peptide transport, 457
- Bacteria, anaerobic
from chicken cecum, 678
- Bacterial culture longevity, control
inorganic phosphate and temperature, 292
- Bacterial interference
gonorrhea resistance, 1014
- Bacterial metabolism, oxidative or fermentative
one-tube test, 811
- Bacteria, thermophilic mixed culture
methanol utilization, 1112

- Bacterionema matruchotii*
culture purity assessments and morphological dissociation, 1134
- Bacteriophages
experimentally infected cell cultures, 1105
- Bacteriophage typing
P. mirabilis, *P. vulgaris*, and *P. morganii*, 47
- Bacteroides fragilis*
tryptic soy bile-kanamycin test, 480
- Basidiomycete, thermotolerant
food protein, production, 1142
- Batch adsorption
staphylococcal enterotoxin, detection, 83
- B-D Vacuainers
tri-butoxyethyl phosphate as a contaminant, 300
- Beneckea natriegens*
isolation from coastal salt marshes, 980
- Blastomyces dermatitidis*
American and African isolates, antigenic relationship, 496
- Botulinal toxin assays
use of antitoxin to crystalline toxin, 333
- Brevibacterium linens*
cell-bound lipase and esterase, 607
- Brilliant green-phenol red agar
factors affecting selectivity, 118
- Broth cultures, automatic transfer
simple device, 612
- Bysschlamys* asci
free heat-resistant ascospores, 671
- Callinectes sapidus*
C. botulinum type E, spores, 629
- Campylobacter fetus* ss. *jejuni* (*Vibrio fetus*)
commercially processed poultry, 995
- Candida albicans*
inhibition of *N. gonorrhoeae*, 192
- Capillary tube diffusion
C. botulinum toxin, detection, 1017
- Carbohydrate fermentation, detection
gram-negative nonsporeforming anaerobes, 603
- Carbon dioxide concentration
effect on growth of anaerobic bacteria, 1098
- Catalase-negative microorganisms
plating isolation, 432
- Cell cultures
simple method for controlled freezing, 616
experimentally infected, 1105
humidified atmosphere, maintenance, 618
- Cellular components
lactic streptococcus cultures, stability, 793
- Cellular elemental composition, measurement
SEM with energy dispersion X-ray analysis, 609
- Cellular fatty acid composition
L. bulgaricus, survival in liquid nitrogen, 738
- Cellulase production
T. viride, 1061
- Cellulose fermentation
substrate pretreatment, effect, 159
- Chicken
fecal coliforms, detection, 1127
- Chicken cecum
anaerobic bacteria, identification, 678
- Chlamydia trachomatis*
isolation by 5-iodo-2-deoxyuridine-treated cells, 912
purification on Renografin density gradients, 102
- Cholera and noncholera vibrios, injections
antibody responses in rabbits, 375
- Chorioallantoic membrane measles
new further attenuated vaccine, 763
- Citrinin production
P. viridicatum, 427
 β -isopropyl glutaric acid, accumulation, 1070
- Cladosporium*
1-menthene transformation, 1070
- Clostridium botulinum*
compound inhibitory, 329
heat injury and recovery of vegetative cells, 425
indirect fluorescent antibody reaction, 179
interconversion by specific phages, 251
toxin formation, in wieners, 605
toxin production in bacon, 733
- Clostridium botulinum*, spores
lysozyme effect on recovery, 613
survival studies, 629
- Clostridium botulinum* toxin
detection by capillary tube diffusion, 1017
- Clostridium perfringens*
enumeration in egg yolk-free tryptose-sulfite-cycloserine agar, 521, 527
media for enumeration, 78
- Clostridium perfringens* spores
enumeration method, 784
lysozyme, requirement and sensitivity, 797
- Coastal salt marshes
B. natriegens isolation, 980
- Coccidioides immitis*
soil ecology, 379
- Colicin typing
S. sonnei, 312
- Coliform organisms
modeling techniques, 340
- Coliphages, ribonucleic acid-containing
density in sewage, 640
- Colony counter, automated
evaluation, 264
- Commercial fetal calf serum
examination for antiviral inhibitors to viruses affecting cattle, 114
- Complement fixation tests
for antibodies against M protein, 1
- Compound inhibitory
C. botulinum type E, 329
- Corynebacterium vaginale*
Ouchterlony analysis, 469
- Coziella burneti*
vaccine production, 777
- Cryptococcal antigen
commercial latex agglutination test kit, evaluation, 620
- Cryptococcus laurentii*
isolation from Suwanee River, 1108
- Cryptococcus neoformans*
detection medium containing trypan blue and antibiotics, 38

- Crystalline type A botulinal toxin
 toxin assays, evaluation, 333
Culture purity assessments
 B. matruhotii, 1134
Cysteine-nitrosothiol
 antibacterial effect, 202
Densitometer, simple, 281
Deoxyribonuclease production, extracellular
 anaerobic bacteria, 1031
Deoxyribonucleic acid homology studies
 S. aureus typing phages, 317
Detection of bacteria
 small-sample blood culture method, 297
Dichlorvos
 inhibition of aflatoxin production, 394
Diplodia maydis
 morphology, via scanning electron microscopy,
 232
Direct fluorescent-antibody method
 P. carinii pneumonitis, diagnosis, 144
Diurnal variations
 nitrogenase activity in the field, 662
Dried bacteria
 viability during storage in vacuo, 648
East African Colobus monkeys
 stomach fermentation, 713
Edwardsiella tarda
 isolation from swine, 703
Egg yolk-free tryptose-sulfite-cycloserine agar
 fecal *C. perfringens* spores, enumeration, 527
 food-borne *C. perfringens*, 521
Elemental mercury, introduction
 biological growth systems, 622
Embedding method
 virus detection, 407
Encephalomyocarditis virus
 inactivation in aerosols, 59
 microtiter hemagglutination-inhibition test, 272
Energy dispersion X-ray analysis
 with SEM for measuring cellular elemental com-
 position, 609
Enrichment medium
 V. parahaemolyticus, isolation, 1124
Enrichment serology
 FA methods, comparison, 324
Enteric bacteria
 in water, 484
Enteric media, evaluation
 isolation of salmonella and shigella, 197
Enteric virus detection
 finished waters, conditioning apparatus, 1177
Enterobacteriaceae
 identification by r/b expanders, 575
Enteroviruses, isolation
 polluted surface waters, 920
Enumeration
 C. perfringens spores, 784
Enzymatic properties
 aspartase-containing *E. coli*, immobilized cells,
 882
Enzyme visualization, methods
 polyacrylamide gels, 154
Escherichia coli
 L-aspartic acid production, 878
 membrane fecal coliform test, 771
 survival in sea water, 983
Escherichia coli, hydrogen-positive variants
 biochemical & serological characterization, 54
Estuarine microfouling sequence
 UV irradiation for control of, 172
Eutrophic lake
 amino acid uptake, 488
Fecal coliforms
 in chicken, detection method, 1127
 porcelain cup soil water samplers, evaluation,
 1172
Flavine-adenine dinucleotide production
 S. lutea, mutant, 531
Flavobacterium pectinovorum
 polygalacturonate lyase production, 346
Flavor compounds, volatile
 Aspergillus, *Penicillium*, and *Fungi imperfecti*
 molds, 1001
Fluorescent-antibody methods
 comparison with enrichment serology for *Sal-*
 monella detection, 324
Fluorescent antibody reactions
 technique for testing effect of substances, 259
Fluorescent antibody reagents
 Salmonella detection, 862
Fluorescent antibody studies of salmonellae
 use of frozen fixed smears, 418
Fluorescent bacteria, enumeration
 comparison of methods, 290
5-Fluorouracil
 isolation of leptospirae, 270
Food protein, production
 thermotolerant basidiomycete, 1142
Francisella tularensis serum agglutinins
 microagglutination test, 25
Frankfurter process
 salmonella and natural aerobic flora, 724
Fungi, detection
 on spacecraft, 566
Fusarium species
 zearalenone-producing, distribution in Japan,
 625
Gas chromatographic characterization
 studies on *Pseudomonas* species, 303
Gas leaks, detection
 anaerobic glove box, 806
Gas production measurement
 pressure transducer method, 135
Genetic transformation assay
 M. osloensis, diagnosis, 16
Geotrichum candidum
 propagation in acid brine, 807
Glutaric acid production
 P. diminuta and *P. vesiculare*, differentiation,
 437
Gonococcal infection
 three serological tests, 695
Gonorrhea, resistance
 possible mediation by bacterial interference, 1014

- Gram-negative anaerobes
 carbohydrate fermentation, detection, 603
- Gram-positive bacteria
 isolation from burn wounds, 420
- Group O erythrocytes, human
 JE virus hemagglutination, 653
- Heat injury
 C. botulinum type E, 425
- Herpes simplex virus, temperature-sensitive mutants
 isolation and selection, 1034
- Heterotrophic microorganisms
 stress, 429
- High-titer lactic streptococcus phages
 preparation and storage, 72
- Human diploid cell rabies vaccine
 antibody response, 553
- Human fecal flora
 normal flora of Japanese-Hawaiians, 961
- Hungate technique
 serum bottle modification, 985
- Hydrocarbons
 microbial degradation of petroleum, 1053
- Hydrogen sulfide production
 P. putrefaciens, 666
- Immunofluorescence
 autecological study of *Nitrobacter*, 124
 mycoplasma colonies, 1170
- Immunofluorescent cell assay
 infectious pancreatic necrosis virus, 593
- Immunoperoxidase staining
 leptospirae, 268
- Indirect fluorescent antibody reaction
 C. botulinum type E, 179
- Indirect hemagglutination tests
 mycoplasma antigen preparations, 356
- Indirect micro hemagglutination test
 for amebiasis, 11
- Indole production
 detection by gram-positive nonsporeforming anaerobes, 562
- Infectious pancreatic necrosis virus
 immunofluorescent cell assay, 593
- Inorganic phosphate
 bacterial culture longevity, control, 292
- Interconversion
 C. botulinum type C and D strains, 251
- In vitro metabolism
 T-2 toxin, 423
- 5-Iodo-2-deoxyuridine
 C. trachomatis, isolation, 912
- Japanese encephalitis virus
 hemagglutinating agent, 653
- Japanese quail embryo fibroblast cells
 assay of turkey herpesvirus, 218
- KCN medium, improved
 semisolid tetrazolium salt agar medium, 262
- Ketopantoyl lactone
 reduction to pantoyl lactone, 130
- Lactic streptococci
 lysogenic strains, 210
 morphology of phages, 411
- Lactic streptococcus cultures
 stability at -17°C , 793
- Lactobacillus bulgaricus*
 effect of sodium oleate, 738
- Laser biophotometer
 high precision, large capacity, 874
- Latex agglutination test kit
 cryptococcal antigen, 620
- Leptospirae, isolation
 use of 5-fluorouracil, limitations, 270
- Leptospirae
 immunoperoxidase staining, 268
- Lipase and esterase
 B. linens, 607
- Lipid and aflatoxin, synthesis
 by *A. parasiticus*, 452
- Lipopolysaccharide
 from agglutinable and non-agglutinable vibrios, 634
- Liquid blood culture media
 tryptic soy and Columbia broths, comparison, 699
- Listeria monocytogenes*
 immune response in rabbits and humans, 1005
- Lyase production
 B. subtilis and *F. pectinovorum*, 346
- Lysine decarboxylase activity, determination
 study of media, 464
- Lysogenic bacteriophages, isolation
 rapid plate method, 278
- Lysogenic strains
 group N lactic streptococci, 210
- Lysozyme
 heated *C. perfringens* spores, 612, 797
- MacConkey agar test for mycobacteria
 two commercial formulations, comparison, 917
- Measles vaccine
 chorioallantoic membrane measles, 763
- Medium containing trypan blue and antibiotics
 detection of *C. neoformans*, 38
- Megasphaera elsdenii*
 isolation from human feces, 274
- Membrane fecal coliform test
 E. coli as indicator organism, 771
- Membrane filter field monitors
 microbiological air sampling, 517
- 1-Menthene, transformation
 Cladosporium, 1070
- Mercurial preservatives
 bacterins, vaccines, and antisera, 1004
- Mercury
 elemental state, 870
- Mercury-resistant bacteria
 petroleum degradation, 285
- Mesenteric lymphadenitis
 unusual *Y. enterocolitica* isolates, 858
- Methanol, utilization
 bacterial growth, 1112

- Methyl alcohol precipitation
 oncogenic herpesviruses, concentration, 988
- Microagglutination test
 F. tularensis serum agglutinins, 25
- Microbial contamination
 mathematical estimation by volumetric air sampling, 706
- Microbial oil use
 urea-phosphate amendment, 166
- Microbiological air sampling
 membrane filter field monitors, 517
- Microorganisms, denitrification
 culture medium and autoclaved soil, comparison, 674
- Micro-serum neutralization test
 commercial fetal calf serum, 114
- Microtiter hemagglutination-inhibition test
 encephalomyocarditis virus antibodies, detection, 272
- Molds
 Aspergillus, *Penicillium*, and *Fungi imperfecti*, 1001
- Moraxella osloensis*
 genetic transformation assay for diagnosis, 16
- Morphological dissociation
 B. matruhotii, 1134
- Morphology
 Diplodia maydis, 232
- Motile bacteria
 velocity measurements by a videotape recording technique, 283
- Mouse bone marrow cells
 Rauscher leukemia virus production, 224
- M proteins
 complementation tests for antibodies, 1
 purification method, 28
- Multiple banding problem
 M proteins, purification, 28
- Multivalent fluorescent antisera, production
 M. avium-*M. intracellulare* complex, 753
- Mycobacteria
 isolation from swine lymph nodes, 448
- Mycobacterium avium*-*Mycobacterium intracellulare* complex
 organism identification, 753
- Mycobacterium intracellulare*
 serum agglutinins in disease, 1164
- Mycoplasma antibodies
 detection, 356
- Mycoplasma colonies
 immunofluorescent identification, 1170
- Natural animal casings
 Salmonella, 66
- Neisseria gonorrhoeae*
 inhibition by *C. albicans*, 192
 new system for cultivation, 802
 NYC medium for isolation, 1041
 rapid fermentation test, 1027
 scanning electron microscopy study, 584
 serological identification, slide agglutination method, 368
- simplified sugar fermentation plate technique, 416
- Newcastle disease virus
 antibody detection system, 890
 avirulent (lentogenic) strains, 1162
- Nitrobacter*
 autecological study by immunofluorescence, 124
- Nitrogenase activity
 diurnal variations, 662
- Nonsporeforming anaerobes
 indole production, detection, 562
- North Saskatchewan River
 microbial content, 93
- NYC medium
 N. gonorrhoeae, large-colony mycoplasmas and
 T mycoplasmas, simultaneous isolation, 1041
- Obligate anaerobes, cultivation
 Hungate technique, modification, 985
- Oncogenic herpesviruses
 methyl alcohol precipitation, 988
- Ouchterlony analysis
 C. vaginale, 469
- Pantoyl lactone
 reduction of ketopantoyl lactone, 130
- Paper chromatography
 anaerobic bacteria, identification, 500
- p*-Dimethylaminobenzenediazo sodium sulfonate
 degradation by *P. fragi* Bk9, 43
- Penicillium viridicatum*
 production of citrinin, 427
- Peptide transport in bacteria
 new method for study, 457
- Petroleum
 microbial degradation, 1053
- Petroleum degradation
 mercury-resistant bacteria, 285
- Phenanthrene, physical state
 utilization by bacteria, 1081
- pH level
 effect on heat-stressed *S. aureus*, 443
- Phosphatase activity
 anaerobic organisms, 744
- Plaque-antiserum method
 virus infectivity, assay, 901
- Plaque assay
 rickettsiae in a mammalian cell line, 1157
- Plastic bags
 humidified atmosphere for animal cell cultures, 618
- Plate hemolysin test
 toxoplasma antibodies, rapid screening, 896
- Plating isolation
 catalase-negative microorganisms, 432
- Pneumocystis carinii* pneumonitis
 direct fluorescent-antibody method for diagnosis, 144
- Poliovirus, recovery
 from turbid estuarine water, 506
- Polluted waters
 enterovirus isolation, 920

- Polyacrylamide gels
 visualization of enzymes, methods for, 154
- Polycarbonate membrane radioimmunoassay
 antibody, detection and quantitation, 475
- Polyporus dichrous*
 oxygenation of 4-alkoxyl groups, 360
- Porcelain cut soil water samplers
 fecal coliform analyses, 1172
- Positive blood cultures, detection
 macroscopic examination, routine gram stains,
 and subcultures, comparison, 537
- Poultry, commercially processed
 C. fetus ss. *jejuni* (*V. fetus*), 995
- Prereduced culture media, anaerobically sterilized
 bacteremia after tooth extractions, 927
- Pressure transducer method
 gas production measurement, 135
- Propylene oxide, liquid
 addition to dried materials for destruction of
 salmonellae, 276
- Protease formation
 halophilic *Bacillus* strain, 809
- Proteinase activity
 S. lactis, lactic acid-producing variants, 933
- Proteus mirabilis*, *P. vulgaris*, and *P. morgani*
 phage typing, 47
- Pseudomonas*
 short-chain acids, 570
- Pseudomonas aeruginosa*
 membrane filter method for isolation, 938
 pyocin typing, 400
 tracing, antibiogram and serotyping, 1167
- Pseudomonas diminuta*
 method of differentiating from *P. vesiculare*, 437
- Pseudomonas fragi*
 degradation of Dexon, 43
- Pseudomonas putrefaciens*
 in nitrogen-packed shrimp, 666
- Pseudomonas* species
 pyocin sensitivity, 288
- Pseudomonas vesiculare*
 method of differentiating from *P. diminuta*, 437
- Pyocin sensitivity
 Pseudomonas species, 288
- Pyocin typing
 P. aeruginosa, 400
- Rabies hyperimmune plasma
 Wyeth rabies vaccine, 553
- Radiometric detection
 bacteremia in neonates, 1067
- Rapid fermentation test
 N. gonorrhoeae, 1027
- Rauscher leukemia virus production
 mouse bone marrow (JLS-V9) cells, 224
- r/b Expanders
 Enterobacteriaceae, identification, 575
- Renografin density gradients
 C. trachomatis, purification, 102
- Rickettsiae
 plaque assay, 1157
- Rubella hemagglutination-inhibition test
 three serum treatment procedures, 767
- Rumen bacteria
 relationships with plant tissues, 1149
 sodium, growth requirement, 549
- Ruminal microorganisms
 tryptophan and related indolic compounds, dis-
 simulation, 540
- Saccharomyces cerevisiae*
 survival at 3 to 5 C, 1175
- Salmonella*
 in natural animal casings, 66
- Salmonella* and *Arizona* organisms
 isolation methods, 8
- Salmonella* detection
 FA methods and enrichment serology, compari-
 son, 324
- Salmonellae*
 FA detection, commercial conjugates, 862
- Salmonellae*, destruction
 liquid propylene oxide, addition to dried mate-
 rials, 276
- Salmonella*, isolation
 evaluation of enteric media, 197
 selenium in selenite enrichment media, 814
- Salmonella senftenberg*
 frankfurter process, 724
- Salmonella* strains
 cysteine-nitrososulfide, antibacterial effect, 202
- Sarcina lutea*
 flavine-adenine dinucleotide production from
 riboflavine, 531
 survival at 3 to 5 C, 1175
- Scanning electron microscopy
 N. gonorrhoeae, 584
- Seafood, cooked
 V. parahaemolyticus, survival, 657
- Sea water
 R⁺ *E. coli*, survival, 983
- Selenium
 salmonellae isolation, 814
- Serological identification, slide agglutination
 method
 N. gonorrhoea, 368
- Serological microtechnique system
 complement-fixation and indirect hemagglutina-
 tion tests, 440
- Serotyping
 avian mycoplasma species, 997
- Serum agglutinins
 disease caused by *M. intracellulare*, 1164
- Serum bactericidal activity
 method for determining, 185
- Serum-free tissue culture medium
 A. laidlawii, isolation, 1046
- Sewage
 RNA-containing coliphages, density, 640
- Shigella*, isolation
 evaluation of enteric media, 197
- Shigella sonnei*
 colicin typing, 312
- Short-chain acids
 Pseudomonas species, 570
- Skin, animals
 ¹⁴C-labeled tuberculin PPD, retention, 1085

- Small-sample blood culture method
 central arterial and peripheral blood, 297
- Sodium
 growth requirement for rumen bacteria, 549
- Sodium ascorbate and sodium nitrite
 C. botulinum, toxin formation, 605
- Sodium chloride concentrations
 effect on heat-stressed *S. aureus*, 443
- Sodium hippurate hydrolysis
 group A, B, and D streptococci, identification, 107
- Sodium nitrite, effect
 toxin production by *C. botulinum*, 733
- Sodium polyanetholsulfonate
 anaerobic cocci sensitivity, 1131
 in media, for detection of bacteremia, 187
 tryptic soy and Columbia broths, 699
- Soil
 microbial oil use, 166
- Soil, autoclaved
 microorganisms, denitrification, 674
- Soil ecology
 C. immitis, 379
- Soybean food fermentation
 acid protease production by fungi, 906
- Spacecraft
 fungi detection, 566
 microbial contamination on surfaces, 706
- Staphylococcal enterotoxin
 detection in foods, 83
- Staphylococcus aureus*
 DNA homology studies, 317
- Staphylococcus aureus*, heat-stressed
 effect of pH and NaCl, 443
- Sterol conversions, microbiological
 utilization of selected mutants, 991
- Stomach fermentation
 Colobus monkeys, 713
- Storage, in vacuo
 dried bacteria, viability, 648
- Streptococcal antibodies, detection
 streptozyme test, 748
- Streptococcal groups
 bacitracin screening techniques, 141
- Streptococci and salmonella, metabolism
 inhibition by specific antisera, 351
- Streptococci, group A, B, and D
 identification using sodium hippurate hydrolysis, 107
- Streptococcus lactis*
 proteinase activity, 933
- Streptococcus mutans*
 amino acid requirements, 86
- Streptozyme test
 streptococcal antibodies, detection, 748
- Stress
 heterotrophic microorganism enumeration, 429
- Substrate pretreatment
 effect on microbial growth, 159
- Sugar fermentation plate technique
 N. gonorrhoeae, identification, 416
- Swimming pools
 P. aeruginosa isolation, membrane filter method, 938
- Swine
 E. tarda, isolation, 703
- Swine lymph nodes
 mycobacteria, isolation, 448
- Toxic metabolite
 A. wentii, 337
- Toxoplasma antibodies
 plate hemolysin test for screening, 896
- Tracing, epidemiological
 P. aeruginosa, 1167
- Transformation test
 Acinetobacter (Mima and Herellea), identification, 1023
- Transmission electron microscopy
 rumen bacteria and plant tissue, interrelationships, 1149
- Tri-butoxyethyl phosphate
 contaminant in B-D Vacutainers, 300
- Trichoderma viride*
 cellulase production on feedlot waste, 1061
- 2,4,6-Trinitrotoluene
 metabolic disposition, 513
- Trypsin-modified human erythrocytes
 rubella HAI test, 767
- Tryptic soy bile-kanamycin test
 B. fragilis, identification, 480
- Tryptic soy broth
 Columbia broth, comparison, 699
- Tryptophan
 dissimilation by ruminal microorganisms in vitro, 540
- T-2 toxin
 in vitro metabolism, 423
- Tuberculin purified protein derivative
 retention in the skin of animals, 1085
- Turbid estuarine water
 recovery of poliovirus by use of Celite, 506
- Turkey herpesvirus
 assay using Japanese quail embryo fibroblast cells, 218
- Ultraviolet-induced fluorescence method
 aflatoxin-producing strains of *A. flavus*, detection, 1118
- Ultraviolet irradiation
 estuarine microfouling sequence, control, 173
- Urocanic acid
 enzymatic production by *A. liquidum*, 688
- Vaccine production
 C. burnetii, attenuated M-44 strain, 777
- Venezuelan equine encephalitis vaccine
 prepared from attenuated TC-83 strain virus, 150
- Vibrio parahaemolyticus*
 enrichment in a simple medium, 1124
 isolation from salt springs, 435
 survival at refrigeration temperatures, 657
 water activity, solute, and temperature, effects, 1075
- Vibrios, agglutinable and non-agglutinable
 lipopolysaccharide, 634

- Vibrio succinogenes*
 L-asparaginase production, 206
Videotape recording technique
 velocity measurements of motile bacteria, 283
Virulent bacteriophage
 B. subtilis (var. *amyloliquefaciens*), 600
Virus detection
 embedding procedure, 407
Virus infectivity
 plaque-antiserum method, 901
Volumetric air sampling
 microbial contamination, mathematical estimation, 706
Water activity, solute, and temperature
 V. parahaemolyticus, growth, 1075
Water-conditioning apparatus
 enteric virus detection, 1177
Yeast
 mercury reduction, elemental state, 870
Yeasts, identification
 Suwannee River estuary in Florida, 1108
Yersinia enterocolitica, unusual isolates
 mesenteric lymphadenitis, non-association, 858
Zearalenone
 production by *Fusarium* spp., 625

APPLIED MICROBIOLOGY

VOLUME 27

BALTIMORE, MD. 21202

1974

Environmental Microbiology and Ecology

Influence of Incubation Atmosphere on Growth and Amino Acid Requirements of <i>Streptococcus mutans</i> . R. A. COWMAN, M. M. PERRELLA, AND R. J. FITZGERALD . . .	86
Urbanization and the Microbial Content of the North Saskatchewan River. R. N. COLEMAN, J. N. CAMPBELL, F. D. COOK, AND D. W. S. WESTLAKE . . .	93
Autecological Study of the Chemoautotroph <i>Nitrobacter</i> by Immunofluorescence. C. B. FLIERMANS, B. B. BOHLOOL, AND E. L. SCHMIDT . . .	124
Effect of Amendments on the Microbial Utilization of Oil Applied to Soil. A. JOBSON, M. McLAUGHLIN, F. D. COOK, AND D. W. S. WESTLAKE . . .	166
Control of an Estuarine Microfouling Sequence on Optical Surfaces Using Low-Intensity Ultraviolet Irradiation. L. H. DiSALVO AND A. B. COBET . . .	172
Velocity Measurements of Motile Bacteria by Use of a Videotape Recording Technique. W. R. SCHNEIDER AND R. N. DOETSCH . . .	283
Mercury-Resistant Bacteria and Petroleum Degradation. J. D. WALKER AND R. R. COLWELL . . .	285
Comparison of Methods for Enumerating Fluorescent Bacteria. W. F. McTERNAN, J. C. ADAMS, AND P. A. RECHARD . . .	290

Food Microbiology and Toxicology

<i>Salmonella</i> in Natural Animal Casings. D. A. GABIS AND J. H. SILLIKER . . .	66
Preparation and Storage of High-Titer Lactic Streptococcus Bacteriophages. J. NYIENDO, RAMON J. SEIDLER, W. E. SANDINE, AND P. R. ELLIKER . . .	72
Evaluation and Modifications of Media for Enumeration of <i>Clostridium perfringens</i> . A. H. W. HAUSCHILD AND R. HILSHEIMER . . .	78
Detection of Staphylococcal Enterotoxin in Foods. RAOUL REISER, DONNA CONA-WAY, AND MERLIN S. BERGDOLL . . .	83
Factors Affecting Selectivity of Brilliant Green-Phenol Red Agar for Salmonellae. W. A. MOATS AND J. A. KINNER . . .	118
Antibacterial Effect of Cysteine-Nitrosothiol and Possible Precursors Thereof. K. INCZE, J. FARKAS, VILMA MIHÁLYI, AND E. ZUKÁL . . .	202
Lysogenic Strains of Group N Lactic Streptococci. R. J. LOWRIE . . .	210
Direct Addition of Liquid Propylene Oxide to Dried Materials for Destruction of Salmonellae. R. B. TOMPKIN AND S. K. STOZEK . . .	276
Simple Densitometer for Microbiology Laboratories. D. M. ADAMS AND J. T. BARACH . . .	281

Metabolism and Products

Conversion of Dexon (<i>p</i> -Dimethylaminobenzenediazo Sodium Sulfonate) to <i>N,N</i> -Dimethyl- <i>p</i> -Phenylenediamine by <i>Pseudomonas fragi</i> Bk9. N. G. K. KARANTH, S. G. BHAT, C. S. VAIDYANATHAN, AND V. N. VASANTHARAJAN . . .	43
Microbial Reduction of Ketopantoyl Lactone to Pantoyl Lactone. RAYMOND P. LANZILOTTA, DOROTHY G. BRADLEY, AND KERRY M. McDONALD . . .	130
Pressure Transducer Method for Measuring Gas Production by Microorganisms. JUDD R. WILKINS . . .	135
Methods for Visualization of Enzymes in Polyacrylamide Gels. W. J. PAYNE, J. W. FITZGERALD, AND K. S. DODGSON . . .	154
Cellulose Fermentation: Effect of Substrate Pretreatment on Microbial Growth. Y. W. HAN AND C. D. CALLIHAN . . .	159
<i>L</i> -Asparaginase Production by the Rumen Anaerobe <i>Vibrio succinogenes</i> . DAVID KAFKEWITZ AND DAVID GOODMAN . . .	206
Morphological Observations of <i>Diplodia maydis</i> on Synthetic and Natural Substrates as Revealed by Scanning Electron Microscopy. JUDITH A. MURPHY, L. LEON CAMPBELL, AND A. J. PAPPALIS . . .	232

Bacterial Culture Longevity: Control by Inorganic Phosphate and Temperature. D. K. SMITH, C. D. BENEDICT, AND E. D. WEINBERG.....	292
Alternative Procedure to Screening a Large Number of Plates for a Low Number of Mutants. DENNIS C. WESTHOFF.....	294
Clinical Microbiology and Immunology	
Evaluation of Micro Complement Fixation Tests for Antibodies Against Group A Streptococcal M and M-Associated Antigens in Rabbit and Human Sera. EDWIN H. BEACHEY, ITZHAK OFEK, MADELEINE CUNNINGHAM, AND ALAN BISNO.....	1
Method for Performing Aerobic Plate Counts of Anhydrous Cosmetics Utilizing Tween 60 and Arlacel 80 as Dispersing Agents. JOHN F. McCONVILLE, CLAUDE B. ANGER, AND DAVID W. ANDERSON, JR.....	5
Evaluation of Methods for Isolating <i>Salmonella</i> and <i>Arizona</i> Organisms from Pet Turtles. JOY G. WELLS, GRACE McCONNELL CLARK, AND GEORGE K. MORRIS..	8
Use of Stable, Sensitized Cells in Indirect Micro Hemagglutination Test for Amebiasis. DAVID C. FARSHY AND GEORGE R. HEALY.....	11
Simple Genetic Transformation Assay for Rapid Diagnosis of <i>Moraxella osloensis</i> . ELLIOT JUNI.....	16
Microagglutination Test for Detecting and Measuring Serum Agglutinins of <i>Francisella tularensis</i> . EUGENE D. MASSEY AND JOSEPH A. MANGIAFICO.....	25
Simplified Method for the Purification of Group A Streptococcal M-Proteins: Solution of the Multiple Banding Problem. DAVID C. STRAUS, ARUNA MEHTA, AND CHARLES F. LANGE.....	28
Medium Containing Trypan Blue and Antibiotics for the Detection of <i>Cryptococcus neoformans</i> in Clinical Samples. RICHARD M. VICKERS, JAMES J. McELLIOTT, JR., JOHN D. RIHS, AND BOSKO POSTIC.....	38
Bacteriophage Typing of <i>Proteus mirabilis</i> , <i>Proteus vulgaris</i> , and <i>Proteus morganii</i> . WILLIAM C. SCHMIDT AND CHARLES D. JEFFRIES.....	47
Biochemical and Serological Characterization of Hydrogen Sulfide-Positive Variants of <i>Escherichia coli</i> . GARY DARLAND AND BETTY R. DAVIS.....	54
Purification on Renografin Density Gradients of <i>Chlamydia trachomatis</i> Grown in the Yolk Sac of Eggs. LAWRENCE HOWARD, NEIL S. ORENSTEIN, AND NORVAL W. KING.....	102
Presumptive Identification of Group A, B, and D Streptococci. R. R. FACKLAM, J. F. PADULA, L. G. THACKER, E. C. WORTHAM, AND B. J. SCONYERS.....	107
Distribution of Streptococcal Groups in Clinical Specimens with Evaluation of Baci- tracin Screening. HELEN M. POLLOCK AND BONNIE J. DAHLGREN.....	141
Direct Fluorescent-Antibody Method for the Diagnosis of <i>Pneumocystis carinii</i> Pneu- monitis from Sputa or Tracheal Aspirates from Humans. SOOK KYUNG LIM, WARREN C. EVELAND, AND RICHARD J. PORTER.....	144
Different pH Optima in the Two Steps of an Indirect Fluorescent Antibody Reaction for <i>Clostridium botulinum</i> Type E. RICHARD A. ROBOHM.....	179
Rapid Method for Determining Serum Bactericidal Activity. RICHARD B. PROVON- CHEE AND STEPHEN H. ZINNER.....	185
Detection of Bacteremia with Liquid Media Containing Sodium Polyanetholsulfonate. MARSHA HALL, EDWARD WARREN, AND JOHN A. WASHINGTON II.....	187
Inhibition of <i>Neisseria gonorrhoeae</i> by a Factor Produced by <i>Candida albicans</i> . SALLY S. HIPP, WILLIAM D. LAWTON, NORMAN C. CHEN, AND HASSAN A. GAAFAR.....	192
Clinical Evaluation of Enteric Media in the Primary Isolation of <i>Salmonella</i> and <i>Shigella</i> . HELEN M. POLLOCK AND BONNIE J. DAHLGREN.....	197
Gradient Technique to Test the Effects of Substances on Fluorescent Antibody Reac- tions. RICHARD A. ROBOHM.....	259
Improved KCN Medium. TERRY E. MUNSON.....	262
Evaluation of an Automated Colony Counter. W. A. GOSS, R. N. MICHAUD, AND M. B. McGRATH.....	264
Immunoperoxidase Staining of Leptospirae. D. N. TRIPATHY AND L. E. HANSON....	268
Limitations of the Use of 5-Fluorouracil as a Selective Agent for the Isolation of Lepto- spirae. D. R. RIS.....	270

Isolation of <i>Acidaminococcus fermentans</i> and <i>Megasphaera elsdenii</i> from Normal Human Feces. PAUL T. SUGIHARA, VERA L. SUTTER, HOWARD R. ATTEBERY, KENNETH S. BRICKNELL, AND SYDNEY M. FINEGOLD.....	274
Pyocin Sensitivity of <i>Pseudomonas</i> Species. LOIS F. JONES, E. T. THOMAS, J. D. STINNETT, GERALD L. GILARDI, AND J. J. FARMER III.....	288

Virology and Viral Immunology

Inactivation of Encephalomyocarditis Virus in Aerosols: Fate of Virus Protein and Ribonucleic Acid. J. C. DE JONG, M. HARMSSEN, T. TROUWBORST, AND K. C. WINKLER.....	59
Antibody to Viruses Affecting Cattle in Commercial Tissue Culture Grade Fetal Calf Serum. C. R. ROSSI AND G. K. KIESEL.....	114
Inactivated Venezuelan Equine Encephalomyelitis Vaccine Prepared from Attenuated (TC-83 Strain) Virus. FRANCIS E. COLE, JR., STEPHEN W. MAY, AND GERALD A. EDDY.....	150
Use of Japanese Quail Embryo Fibroblast Cells for Propagation and Assay of Turkey Herpesvirus FC-126. W. M. COLWELL, D. G. SIMMONS, AND K. E. MUSE.....	218
Adaptation and Infection of Mouse Bone Marrow (JLS-V9) Cells in Suspension Culture for Production of Rauscher Leukemia Virus. HOWARD M. HODGE, FREDERICK KLEIN, ALOK K. BANDYOPADHYAY, ORSON R. ROBINSON, JR., AND GEORGE P. SHIBLEY.....	224
Interconversion of Type C and D Strains of <i>Clostridium botulinum</i> by Specific Bacteriophages. M. W. EKLUND AND F. T. POYSKY.....	251
Microtiter Hemagglutination-Inhibition Test for the Detection of Encephalomyocarditis Virus Antibodies. G. P. GARD, E. M. BATTY, AND HELEN M. SABA.....	272
Rapid Plate Method for the Isolation of Lysogenic Bacteriophages. A. SIDDIQUI, E. HART, U. MANDAGERE, AND I. D. GOLDBERG.....	278
Errata.....	296

Volume 27

Contents for February

Number 2

Environmental Microbiology and Ecology

Comparative Analysis of Modeling Techniques for Coliform Organisms in Streams. JEROME L. MAHLOCH.....	340
Soil Ecology of <i>Coccidioides immitis</i> at Amerindian Middens in California. GEORGE H. LACY AND FRANK E. SWATEK.....	379
Stress: a Factor to be Considered in Heterotrophic Microorganism Enumeration from Aquatic Environments. DONALD A. KLEIN AND SHENYUH WU.....	429
Plating Isolation of Various Catalase-Negative Microorganisms from Soil. D. P. LABEDA, CHRISTINA M. HUNT, AND L. E. CASIDA, JR.....	432
Isolation of <i>Vibrio parahaemolyticus</i> from Salt Springs in Florida. JOHN A. KOBURGER AND CHARLES R. LAZARUS.....	435

Food Microbiology and Toxicology

Comparison of Fluorescent-Antibody Methods and Enrichment Serology for the Detection of <i>Salmonella</i> . H. K. MOHR, H. L. TRENK, AND M. YETERIAN.....	324
Compound Inhibitory to <i>Clostridium botulinum</i> Type E Produced by a <i>Moraxella</i> Species. P. L. KWAN AND J. S. LEE.....	329
Evaluation of Type A Botulinal Toxin Assays That Use Antitoxin to Crystalline Toxin. H. SUGIYAMA, I. OHISHI, AND B. R. DASGUPTA.....	333
Toxic Metabolite Produced by <i>Aspergillus wentii</i> . M. T. WU, J. C. AYRES, P. E. KOEHLER, AND G. CHASSIS.....	337
Inhibition of Aflatoxin Production and Tentative Identification of an Aflatoxin Intermediate "Versiconal Acetate" from Treatment with Dichlorvos. H. W.	

SCHROEDER, R. J. COLE, R. D. GRIGSBY, AND H. HEIN, JR.	394
In Vitro Metabolism of T-2 Toxin. ROBERT A. ELLISON AND FRANK N. KOTSONIS	423
Heat Injury and Recovery of Vegetative Cells of <i>Clostridium botulinum</i> Type E. M. D. PIERSON, S. L. PAYNE, AND G. L. ADES	425
Production of Citrinin by <i>Penicillium viridicatum</i> on Country-Cured Ham. M. T. WU, J. C. AYRES, AND P. E. KOEHLER	427

Metabolism and Products

Polygalacturonate Lyase Production by <i>Bacillus subtilis</i> and <i>Flavobacterium pectinovorum</i> . OWEN P. WARD AND WILLIAM M. FOGARTY	346
Oxygenation of 4-Alkoxy Groups in Alkoxybenzoic Acids by <i>Polyporus dichrous</i> . T. KENT KIRK AND L. F. LORENZ	360
Production of Glutaric Acid: a Useful Criterion for Differentiating <i>Pseudomonas diminuta</i> from <i>Pseudomonas vesiculare</i> . C. WAYNE MOSS AND C. M. KALTENBACH	437

Clinical Microbiology and Immunology

Small-Sample Blood Culture Method for Identification of Bacteria in Central Arterial and Peripheral Blood. PAUL B. JENNINGS, MARTIN H. CRUMRINE, GERALD W. FISCHER, AND THOMAS C. CUNNINGHAM	297
Tri-Butoxyethyl Phosphate as a Contaminant in B-D Vacutainers. DAVID C. FARSHY	300
New Gas Chromatographic Characterization Procedure: Preliminary Studies on Some <i>Pseudomonas</i> Species. THOMAS J. WADE AND ROBERT J. MANDLE	303
Colicin Typing of <i>Shigella sonnei</i> . GEORGE K. MORRIS AND JOY G. WELLS	312
Inhibition of the Metabolism of Streptococci and Salmonella by Specific Antisera. STEVEN M. LARSON, PATRICIA CHARACHE, MARIANNE CHEN, AND HENRY N. WAGNER, JR.	351
Stable Mycoplasma Antigen Preparations for Indirect Hemagglutination Tests. GOW T. LAM AND HARRY E. MORTON	356
Slide Agglutination Method for the Serological Identification of <i>Neisseria gonorrhoeae</i> with Anti-Gonococcal Antibodies Adsorbed to Protein A-Containing Staphylococci. DAN DANIELSSON AND GÖRAN KRONVALL	368
Antibody Responses in Rabbits to Injections of Whole Cell, Flagella, and Flagellin Preparations of Cholera and Noncholera Vibrios. HARRY L. SMITH, JR.	375
Ammonium Sulfate Fractionation of Sera: Mouse, Hamster, Guinea Pig, Monkey, Chimpanzee, Swine, Chicken, and Cattle. G. Ann Hebert	389
Pyocin Typing of <i>Pseudomonas aeruginosa</i> : a Simplified Method. LOIS FAYE JONES, J. P. ZAKANYCZ, EVAN T. THOMAS, AND JOHN J. FARMER III	400
Simplified Sugar Fermentation Plate Technique for Identification of <i>Neisseria gonorrhoeae</i> . GEORGE S. TAYLOR, JR., AND REGINALD J. KEYS	416
Evaluation of Frozen Fixed Smears for Use in Fluorescent Antibody Studies of Salmonellae. BERENICE M. THOMASON	418
Evaluation of Three Media for Selective Isolation of Gram-Positive Bacteria from Burn Wounds. SANDRA L. DAYTON, DONNA D. CHIPPS, DIANNA BLASI, AND R. F. SMITH	420
Utilization of a Further Miniaturized Serological Microtechnique. SANDRA C. FITZGERALD, DAVID A. FUCCILLO, FLORA MODER, AND JOHN L. SEVER	440

Virology and Viral Immunology

Base Ratio and Deoxyribonucleic Acid Homology Studies of Six <i>Staphylococcus aureus</i> Typing Bacteriophages. MICHAEL W. PARIZA AND JOHN J. IANDELO	317
Two-Hour Embedding Procedure for Intracellular Detection of Viruses by Electron Microscopy. F. W. DOANE, N. ANDERSON, J. CHAO, AND A. NOONAN	407
Morphology of the Bacteriophages of Lactic Streptococci. BARBARA P. KEOGH AND P. D. SHIMIN	411
Errata	442

Contents for March

Volume 27

Number 3

Environmental Microbiology and Ecology

- Rapid Determination of the Presence of Enteric Bacteria in Water. R. P. KENARD AND R. S. VALENTINE. 484
- Heterotrophic Potential for Amino Acid Uptake in a Naturally Eutrophic Lake. B. KENT BURNISON AND RICHARD Y. MORITA. 488
- Metabolic Disposition of 2,4,6-Trinitrotoluene. WILLIAM D. WON, ROBERT J. HECKLY, DONALD J. GLOVER, AND JOHN C. HOFFSOMMER. 513
- Evaluation of Membrane Filter Field Monitors for Microbiological Air Sampling. N. D. FIELDS, G. S. OXBORROW, J. R. PULEO, AND C. M. HERRING. 517
- Sodium, an Obligate Growth Requirement for Predominant Rumen Bacteria. DANIEL R. CALDWELL AND RICHARD F. HUDSON. 549
- Comparison of Media for Detection of Fungi on Spacecraft. C. M. HERRING, J. W. BRANDSBERG, G. S. OXBORROW, AND J. R. PULEO. 566
- Simple Method for Introducing Elemental Mercury into Biological Growth Systems. HARVEY W. HOLM AND MARILYN F. COX. 622

Food Microbiology and Toxicology

- Interaction of pH and NaCl on Enumeration of Heat-Stressed *Staphylococcus aureus*. LAWRENCE R. SMOLKA, F. EUGENE NELSON, AND LEE M. KELLEY. 443
- Comparison of Six Methods for Isolating Mycobacteria from Swine Lymph Nodes. CHARLES O. THOEN, WILLIAM D. RICHARDS, AND JERALD L. JARNAGIN. 448
- Some Cultural Conditions That Control Biosynthesis of Lipid and Aflatoxin by *Aspergillus parasiticus*. C. N. SHIH AND E. H. MARTH. 452
- Enumeration of Food-Borne *Clostridium perfringens* in Egg Yolk-Free Tryptose-Sulfite-Cycloserine Agar. A. H. W. HAUSCHILD AND R. HILSHEIMER. 521
- Enumeration of Fecal *Clostridium perfringens* Spores in Egg Yolk-Free Tryptose-Sulfite-Cycloserine Agar. A. H. W. HAUSCHILD, R. HILSHEIMER, AND D. W. GRIFFITH. 527
- Effect of Sodium Ascorbate and Sodium Nitrite on Toxin Formation of *Clostridium botulinum* in Wieners. V. G. BOWEN, JOHN G. CERVENY, AND R. H. DEIBEL. 605
- Cell-Bound Lipase and Esterase of *Brevibacterium linens*. TERJE SØRHAUG AND Z. JOHN ORDAL. 607

Metabolism and Products

- New Method for Study of Peptide Transport in Bacteria. T. CASCIERI, JR., AND M. F. MALLETTE. 457
- Production of Flavine-Adenine Dinucleotide from Riboflavine by a Mutant of *Sarcina lutea*. TAIZO WATANABE, TOMOFUMI UCHIDA, JOYOJI KATO, AND ICHIRO CHIBATA. 531
- Dissimilation of Tryptophan and Related Indolic Compounds by Ruminal Microorganisms In Vitro. M. T. YOKOYAMA AND J. R. CARLSON. 540
- Energy Dispersion X-Ray Analysis by Scanning Electron Microscopy for Measuring Cellular Elemental Composition in Bacterial Cells. H. GREAVES. 609
- Simple Device for Automatically Transferring Broth Cultures. JUDD R. WILKINS AND STACEY M. MILLS. 612
- Effect of Lysozyme on the Recovery of Heated *Clostridium botulinum* Spores. GORDON ALDERTON, JOHN K. CHEN, AND KEITH A. ITO. 613

Clinical Microbiology and Immunology

- Comparative Study of Media for Determination of Lysine Decarboxylase Activity. STEFAN I. BONEV, ZAKHARI ZAKHARIEV, AND P. GENTCHEV. 464
- Analysis of *Corynebacterium vaginale* by an Immunodiffusion Technique. MARY F. SMARON AND JOHN L. VICE. 469

Radioimmunoassay on Polycarbonate Membranes: a Sensitive and Simplified Method for the Detection and Quantitation of Antibody. RICHARD L. GREEN, ROY W. SCALES, AND STEPHEN J. KRAUS.....	475
Tryptic Soy Bile-Kanamycin Test for the Identification of <i>Bacteroides fragilis</i> . VALERIE VARGO, MYROSLAWA KORZENIOWSKI, AND EARLE H. SPAULDING....	480
Antigenic Relationship Between American and African Isolates of <i>Blastomyces dermatitidis</i> as Determined by Immunofluorescence. M. S. SUDMAN AND W. KAPLAN..	496
Paper Chromatography as an Adjunct in the Identification of Anaerobic Bacteria. M. SLIFKIN AND H. J. HERCHER.....	500
Comparison of Macroscopic Examination, Routine Gram Stains, and Routine Subcultures in the Initial Detection of Positive Blood Cultures. DONNA J. BLAZEVIC, JOANNE E. STEMPER, AND JOHN M. MATSEN.....	537
Methods for Detecting Indole Production by Gram-Negative Nonsporeforming Anaerobes. GUNNAR D. FAY AND ARTHUR L. BARRY.....	562
Short-Chain Acids of <i>Pseudomonas</i> Species Encountered in Clinical Specimens. C. WAYNE MOSS AND S. B. SAMUELS.....	570
r/b Expanders: Their Use in Identifying Routinely and Unusually Reacting Members of <i>Enterobacteriaceae</i> . HENRY D. ISENBERG, P. B. SMITH, A. BALOWS, BARBARA G. PAINTER, D. L. RHODEN, AND KARLA TOMFOHRDE.....	575
Scanning Electron Microscope Study of <i>Neisseria gonorrhoeae</i> . STEPHEN J. KRAUS AND LAWRENCE H. GLASSMAN.....	584
Methods for Detecting Carbohydrate Fermentation by Gram-Negative Nonspore-forming Anaerobes. GUNNAR D. FAY AND ARTHUR L. BARRY.....	603
Evaluation of a Commercial Latex Agglutination Test Kit for Cryptococcal Antigen. LEO KAUFMAN, GLENDA COWART, SHARON BLUMER, AMY STINE, AND ROSS WOOD.....	620

Virology and Viral Immunology

Recovery of Poliovirus from Turbid Estuarine Water on Microporous Filters by the Use of Celite. WILLIAM F. HILL, JR., ELMER W. AKIN, WILLIAM H. BENTON, CHARLES J. MAYHEW, AND THEODORE G. METCALF.....	506
Antibody Response to a Human Diploid Cell Rabies Vaccine. V. J. CABASSO, M. B. DOBKIN, R. E. ROBY, AND A. H. HAMMAR.....	553
Immunofluorescent Cell Assay of Infectious Pancreatic Necrosis Virus. KUENCHING TU, REX S. SPENDLOVE, AND RON W. GOEDE.....	593
Characterization of a Virulent Bacteriophage for <i>Bacillus subtilis</i> (var. <i>amyloliquefaciens</i>). ROBERT J. ERICKSON AND FRANK E. YOUNG.....	600
Simple, Inexpensive Method for Controlled Freezing of Cell Cultures. MARY M. RYAN AND KENDALL O. SMITH.....	616
Use of Plastic Bags to Maintain a Humidified Atmosphere for Animal Cell Cultures. PETER K. VOGT AND PHILIP HARRIS.....	618
Erratum.....	624

Volume 27

Contents for April

Number 4

Environmental Microbiology and Ecology

Synthesis of Indicator Strains and Density of Ribonucleic Acid-Containing Coliphages in Sewage. ELVERA K. S. DHILLON AND T. S. DHILLON.....	640
Diurnal Variations of Nitrogenase Activity in the Field. J. P. BALANDREAU, C. R. MILLIER, AND Y. R. DOMMERGUES.....	662
Comparative Denitrification of Selected Microorganisms in a Culture Medium and in Autoclaved Soil. CHERYL L. NASH AND JEAN-MARC BOLLAG.....	674
Isolation, Culture Characteristics, and Identification of Anaerobic Bacteria from the Chicken Cecum. J. P. SALANITRO, I. G. FAIRCHILD, AND Y. D. ZGORNICKI.....	678

Mathematical Estimation of the Level of Microbial Contamination on Spacecraft Surfaces by Volumetric Air Sampling. G. S. OXBORROW, A. L. ROARK, N. D. FIELDS, AND J. R. PULEO	706
Stomach Fermentation in East African Colobus Monkeys in Their Natural State. KYOKO OHWAKI, R. E. HUNGATE, LEONARD LOTTER, R. R. HOFMANN, AND GEOFFREY MALOY	713
Evaluating the Membrane Fecal Coliform Test by Using <i>Escherichia coli</i> as the Indicator Organism. JAMES B. HUFHAM	771
Detection of Gas Leaks in an Anaerobic Glove Box. GILDA L. JONES AND STANLEY M. DEVER	806

Food Microbiology and Toxicology

Distribution of Zearalenone-Producing <i>Fusarium</i> Species in Japan. KENJI ISHII, MEGUMI SAWANO, YOSHIO UENO, AND HIROSHI TSUNODA	625
Survival Studies with Spores of <i>Clostridium botulinum</i> Type E in Pasteurized Meat of the Blue Crab <i>Callinectes sapidus</i> . RALPH R. COCKEY AND MAHLON C. TATRO . .	629
Survival of <i>Vibrio parahaemolyticus</i> in Cooked Seafood at Refrigeration Temperatures. JOE G. BRADSHAW, DAVID W. FRANCIS, AND ROBERT N. TWEDT	657
Hydrogen Sulfide Production by <i>Pseudomonas putrefaciens</i> in Shrimp Experimentally Packed in Nitrogen. R. M. LAPIN AND J. A. KOBURGER	666
Preparation of Free Heat-Resistant Ascospores from <i>Byssoschlamys</i> Asci. H. DAVID MICHENER AND A. DOUGLAS KING, JR.	671
Microbiology of the Frankfurter Process: Salmonella and Natural Aerobic Flora. S. A. PALUMBO, C. N. HUHTANEN, AND J. L. SMITH	724
Effect of Sodium Nitrite on Toxin Production by <i>Clostridium botulinum</i> in Bacon. L. N. CHRISTIANSEN, R. B. TOMPKIN, A. S. SHAPARIS, T. V. KUEPER, R. W. JOHNSTON, D. A. KAUTTER, AND O. J. KOLARI	733
Relationship of Cellular Fatty Acid Composition to Survival of <i>Lactobacillus bulgaricus</i> in Liquid Nitrogen. R. B. SMITTLE, S. E. GILLILAND, M. L. SPECK, AND W. M. WALTER, JR.	738
Evaluation of Media, Time and Temperature of Incubation, and Method of Enumeration of Several Strains of <i>Clostridium perfringens</i> Spores. WALTER J. CLIFFORD, ABE ANELLIS, AND E. W. ROSS, JR.	784
Relationship of Cellular Components to the Stability of Concentrated Lactic Streptococcus Cultures at -17 C. S. E. GILLILAND AND M. L. SPECK	793
Requirement for and Sensitivity to Lysozyme by <i>Clostridium perfringens</i> Spores Heated at Ultrahigh Temperatures. D. M. ADAMS	797
Propagation of <i>Geotrichum candidum</i> in Acid Brine. Y. D. HANG, D. F. SPLITTSTOESSER, AND R. L. LANDSCHOOT	807
Form of Selenium in Selenite Enrichment Media for Isolation of Salmonellae. A. SCHRIFT AND R. F. BOULETTE	814

Metabolism and Products

Some Factors Affecting the Viability of Dried Bacteria During Storage In Vacuo. BETTY J. MARSHALL, G. G. COOTE, AND W. J. SCOTT	648
Enzymatic Production of Urocanic Acid by <i>Achromobacter liquidum</i> . TAKEJI SHIBATANI, NORIYUKI NISHIMURA, KOICHI NABE, TOSHIO KAKIMOTO, AND ICHIRO CHIBATA	688
Phosphatase Activity of Anaerobic Organisms. RICHARD K. PORSCHEN AND EARLE H. SPAULDING	744
Protease Formation by a Moderately Halophilic <i>Bacillus</i> Strain. MASAHIRO KAMEKURA AND HIROSHI ONISHI	809
One-Tube Test for Determining Oxidative or Fermentative Metabolism of Bacteria. WILLIAM J. BROWN	811

Clinical Microbiology and Immunology

Immunochemical Studies on Lipopolysaccharide from Agglutinable and Non-Agglutinable Vibrios. BHAKTI GUHATHAKURTA AND G. C. DUTTA	634
--	-----

Comparison of Three Serological Tests in Gonococcal Infection. C. U. RODAS AND A. R. RONALD	695
Comparison of Two Liquid Blood Culture Media Containing Sodium Polyanethole-sulfonate: Tryptic Soy and Columbia. MARSHA HALL, EDWARD WARREN, AND JOHN A. WASHINGTON II.	699
Isolation of <i>Edwardsiella tarda</i> from Swine. DWIGHT R. OWENS, STUART L. NELSON, AND J. BRUCE ADDISON	703
Specificity and Sensitivity of the Streptozyme Test for the Detection of Streptococcal Antibodies. AZIZ EL KHOLY, KHALIL HAFEZ, AND RICHARD M. KRAUSE	748
Production of Multivalent Fluorescent Antisera for Identification of Organisms in the <i>Mycobacterium avium</i> - <i>Mycobacterium intracellulare</i> Complex. PETER W. GALES, RONALD R. MARTINS, AND WILLIAM E. WALKER	753
Production of a Potent Vaccine from the Attenuated M-44 Strain of <i>Coxiella burnetii</i> . DAVID M. ROBINSON AND SHERMAN E. HASTY	777
New System for Cultivation of <i>Neisseria gonorrhoeae</i> . JOHN E. MARTIN, JOHN H. ARMSTRONG, AND P. B. SMITH	802
Virology and Viral Immunology	
Trypsinized Human Group O Erythrocytes as an Alternative Hemagglutinating Agent for Japanese Encephalitis Virus. K. F. SHORTRIDGE AND L. Y. HU	653
Interactions of Standard Antibody with Australia Antigens in Au Ag-Ab Radio-immunoassay. HARRY DAUGHARTY, RUTH G. YOUNG, MILFORD H. HATCH, AND DONALD W. ZIEGLER	756
Chorioallantoic Membrane Measles: Development and Clinical Evaluation of a New Further Attenuated Measles Vaccine. COSTANTINO P. CERINI, JORGE ARGUEDAS G., GUILLERMO HERNANDEZ C., PAUL H. FRICKEY, AND ANNE V. DOUGLAS	763
Compatibility of Trypsin-Modified Human Erythrocytes in the Rubella Hemagglutination-Inhibition Test Employing Three Serum Treatment Procedures. DONALD B. NELSON, EDWARD P. QUIRIN, AND STANLEY L. INHORN	767
ERRATUM	817

Volume 27

Contents for May

Number 5

Environmental Microbiology and Ecology

Microbiological Study of a Hypersaline Lake in French Somaliland. J. BRISOU, D. COURTOIS, AND F. DENIS	819
Comparative Survival of Indicator Bacteria and Enteric Pathogens in Well Water. GORDON A. McFETERS, GARY K. BISSENETTE, JAMES J. JEZESKI, CAROLE A. THOMSON, AND DAVID G. STUART	823
Reduction of Mercury to the Elemental State by a Yeast. RICHARD L. BRUNKER AND THOMAS L. BOTT	870
A High-Precision and Large-Capacity Laser Biophotometer. A. MARCHAND, J. J. PIAUD, AND P. DU PASQUIER	874
Environmental Factors Influencing Isolation of Enteroviruses from Polluted Surface Waters. THEODORE G. METCALF, CRAIG WALLIS, AND JOSEPH L. MELNICK	920
Membrane Filter Method for the Isolation and Enumeration of <i>Pseudomonas aeruginosa</i> from Swimming Pools. M. H. BRODSKY AND M. C. NIXON	938
Human Fecal Flora: The Normal Flora of 20 Japanese-Hawaiians. W. E. C. MOORE AND LILLIAN V. HOLDEMAN	961
Isolation of Bacteriophages of the Marine Bacterium <i>Beneckea natriegens</i> from Coastal Salt Marshes. ARTHUR ZACHARY	980
Survival of R ⁺ <i>Escherichia coli</i> in Sea Water. PETER R. SMITH, EVELYN FARRELL, AND KIERAN DUNICAN	983

Food Microbiology and Toxicology

Inactivation of Dried Bacteria and Bacterial Spores by Means of Gamma Irradiation at High Temperatures. CLAUS EMBORG.....	830
Salmonellae in the Environment Around a Chicken Processing Plant. A. W. HOADLEY, W. M. KEMP, A. C. FIRMIN, G. T. SMITH, AND P. SCHELHORN.....	848
Evaluation of Commercial Conjugates for Fluorescent Antibody Detection of Salmonellae. BERENICE M. THOMASON AND G. ANN HEBERT.....	862
Acid Protease Production by Fungi Used in Soybean Food Fermentation. HWA L. WANG, JANET B. VESPA, AND C. W. HESSELTINE.....	906
Proteinase Activity in Slow Lactic Acid-Producing Variants of <i>Streptococcus lactis</i> . L. E. PEARCE, N. A. SKIPPER, AND B. D. W. JARVIS.....	933
<i>Campylobacter fetus</i> Subspecies <i>jejuni</i> (<i>Vibrio fetus</i>) from Commercially Processed Poultry. MERTON V. SMITH II AND PATRICK J. MULDOON.....	995

Metabolism and Products

Immobilized Aspartase-Containing Microbial Cells: Preparation and Enzymatic Properties. ICHIRO CHIBATA, TETSUYA TOSA, AND TADASHI SATO.....	878
Basic Studies for Continuous Production of L-Aspartic Acid by Immobilized <i>Escherichia coli</i> Cells. TETSUYA TOSA, TADASHI SATO, TAKAO MORI, AND ICHIRO CHIBATA.....	886
Isolation of Polyribosomes from Yeast During Sporulation and Vegetative Growth. DALLICE MILLS.....	944
Microbial Detection Method Based on Sensing Molecular Hydrogen. JUDD R. WILKINS, GLENN E. STONER, AND ELIZABETH H. BOYKIN.....	949
Production and Some Properties of a New Type of Acid Carboxypeptidase of <i>Penicillium</i> Molds. SADAJI YOKOYAMA, AKIRA OOBAYASHI, OSAMU TANABE, SHUICHI SUGAWARA, EMIKO ARAKI, AND EIJI ICHISHIMA.....	953
A Serum Bottle Modification of the Hungate Technique for Cultivating Obligate Anaerobes. TERRY L. MILLER AND M. J. WOLIN.....	985
Microbiological Sterol Conversions: Utilization of Selected Mutants. NANCY L. CARGILE AND JAMES D. MCCHESENEY.....	991

Clinical Microbiology and Immunology

Use of Tunable, Pulsed Dye Laser for Quantitative Fluorescence in Syphilis Serology (FTA-ABS Test). S. S. KASATIYA, N. G. LAMBERT, AND R. A. LAURENCE.....	838
Effect of Heat on the Antimicrobial Activity of Brilliant Green Dye. W. A. MOATS, J. A. KINNER, AND S. E. MADDOX, JR.....	844
Unusual <i>Yersinia enterocolitica</i> Isolates Not Associated with Mesenteric Lymphadenitis. EDWARD J. BOTTONE, BRENT CHESTER, MOISES S. MALOWANY, AND JONA ALLERHAND.....	858
Plate Hemolysin Test for the Rapid Screening of Toxoplasma Antibodies. W. BRUCE JACKSON, G. RICHARD O'CONNOR, AND JOAN M. HALL.....	896
Isolation of <i>Chlamydia trachomatis</i> by Use of 5-Iodo-2-Deoxyuridine-Treated Cells. BERTINA B. WENTWORTH AND E. RUSSELL ALEXANDER.....	912
Comparison of Two Commercial Formulations of the MacConkey Agar Test for Mycobacteria. GEORGE P. KUBICA AND JACK VITVITSKY.....	917
Bacteremia After Tooth Extractions Studied with the Aid of Prereduced Anaerobically Sterilized Culture Media. JAMES J. CRAWFORD, J. R. SCONYERS, JOHN D. MORIARTY, RONALD C. KING, AND JEFFREY F. WEST.....	927

Virology and Viral Immunology

Inactivation of Bacteriophage T ₃ in Aerosols: Effect of Prehumidification on Survival After Spraying from Solutions of Salt, Peptone, and Saliva. T. TROUWBORST AND SJOUKJE KUYPER.....	834
Microculture System for Detection of Newcastle Disease Virus Antibodies. R. E.	

WOOLEY, J. BROWN, J. B. GRATZKE, S. H. KLEVEN, AND T. A. SCOTT.....	890
The Plaque-Antiserum Method: an Assay of Virus Infectivity and an Experimental Model of Virus Infection. SILVIO DE FLORA.....	901
Concentration of Oncogenic Herpesviruses by Methyl Alcohol Precipitation. C. R. GOODHEART, G. R. ARMSTRONG, D. V. ABLASHI, G. PEARSON, AND T. W. ORR....	988

Volume 27

Contents for June

Number 6

Environmental Microbiology and Ecology

Microbial Petroleum Degradation: Use of Mixed Hydrocarbon Substrates. J. D. WALKER AND R. R. COLWELL.....	1053
Cellulase Production by <i>Trichoderma viride</i> on Feedlot Waste. H. L. GRIFFIN, J. H. SLONEKER, AND G. E. INGLET.....	1061
Identification of Yeasts from the Suwannee River Florida Estuary. C. R. LAZARUS AND J. A. KOBURGER.....	1108
Culture Purity Assessments and Morphological Dissociation in the Pleomorphic Microorganism <i>Bacterionema matruchotii</i> . MARION N. GILMOUR AND GWENDOLYN TURNER.....	1134
Rumen Bacterial Interrelationships with Plant Tissue During Degradation Revealed by Transmission Electron Microscopy. DANNY E. AKIN, DONALD BURDICK, AND GENE E. MICHAELS.....	1149
Evaluation of Porcelain Cup Soil Water Samplers for Bacteriological Sampling. FRANK B. DAZZO AND DONALD F. ROTHWELL.....	1172
Apparatus for Conditioning Unlimited Quantities of Finished Waters for Enteric Virus Detection. WILLIAM F. HILL, JR., ELMER W. AKIN, WILLIAM H. BENTON, CHARLES J. MAYHEW, AND WALTER JAKUBOWSKI.....	1177

Food Microbiology and Toxicology

Volatile Flavor Compounds Produced by Molds of <i>Aspergillus</i> , <i>Penicillium</i> , and <i>Fungi imperfecti</i> . E. KAMINSKI, S. STAWICKI, AND E. WASOWICZ.....	1001
Rapid Detection of <i>Clostridium botulinum</i> Toxin by Capillary Tube Diffusion. LEONARD W. MESTRANDREA.....	1017
Combined Effects of Water Activity, Solute, and Temperature on the Growth of <i>Vibrio parahaemolyticus</i> . L. R. BEUCHAT.....	1075
Analysis of Mercurial Preservatives in Bacterins, Vaccines, and Antisera by Atomic Absorption Spectrophotometry. PAUL W. WOODWARD AND JOHN R. PEMBERTON.....	1094
Aflatoxin-Producing Strains of <i>Aspergillus flavus</i> Detected by Fluorescence of Agar Medium Under Ultraviolet Light. S. HARA, D. I. FENNELL, AND C. W. HESSELTINE.....	1118
Rapid Method for Detection and Enumeration of Fecal Coliforms in Fresh Chicken. D. W. FRANCIS, J. T. PEELER, AND R. M. TWEDT.....	1127
Ultrastructure of a Thermotolerant Basidiomycete Possibly Suitable for Production of Food Protein. BENGT V. HOFSTEN AND ANGELICA V. HOFSTEN.....	1142
Survival of <i>Saccharomyces cerevisiae</i> and <i>Sarcina lutea</i> at Refrigerator Temperatures. A. E. TANGUAY AND A. B. BOGERT.....	1175

Metabolism and Products

Extracellular Deoxyribonuclease Production by Anaerobic Bacteria. RICHARD K. PORSCHEN AND SANDRA SONNTAG.....	1031
Transformation of 1-Menthene by a <i>Cladosporium</i> : Accumulation of β -Isopropyl Glutaric Acid in the Growth Medium. BARID B. MUKHERJEE, GARY KRAIDMAN, AND IRA D. HILL.....	1070
Physical State of Phenanthrene for Utilization by Bacteria. RICHARD S. WODZINSKI AND JANICE E. COYLE.....	1081

Thermophilic Mixed Culture of Bacteria Utilizing Methanol for Growth. BRADLEY SNEDECOR AND CHARLES L. COONEY	1112
Clinical Microbiology and Immunology	
Serotyping of Avian Mycoplasma Species in India. P. J. ASNANI AND S. C. AGARWAL. Immune Response to <i>Listeria monocytogenes</i> in Rabbits and Humans. SANDRA A. LARSEN, JOHN C. FEELEY, AND WALLIS L. JONES.	997
Resistance to Gonorrhea Possibly Mediated by Bacterial Interference. STEPHEN J. KRAUS AND NEAL ELLISON	1005
Clinical Studies on a Transformation Test for Identification of <i>Acinetobacter</i> (Mima and Herellea). KAREN BROOKS AND THOMAS SODEMAN	1014
Modification of the Rapid Fermentation Test for <i>Neisseria gonorrhoeae</i> . W. JERRY BROWN	1023
NYC Medium for Simultaneous Isolation of <i>Neisseria gonorrhoeae</i> , Large-Colony Mycoplasmas, and T-Mycoplasmas. YVONNE C. FAUR, MARTIN H. WEISBURD, MARION E. WILSON, AND PAUL S. MAY	1027
Radiometric Detection of Bacteremia in Neonates. ROBERT M. BANNATYNE AND NORMA HARNETT	1041
Retention of ¹⁴ C-Labeled Tuberculin Purified Protein Derivative in the Skin of Sensitized and Nonsensitized Animals. SILVIO LANDI, MEN C. TSENG, AND HANS R. HELD	1041
Effect of Culture Medium and Carbon Dioxide Concentration on Growth of Anaerobic Bacteria Commonly Encountered in Clinical Specimens. DON R. STALONS, CLYDE THORNSBERRY, AND V. R. DOWELL, JR.	1067
Enrichment of <i>Vibrio parahaemolyticus</i> in a Simple Medium. DOKI CHUN, JAE KYU CHUNG, AND SUNG YONG SEOL	1085
Sodium Polyanethol Sulfonate Sensitivity of Anaerobic Cocci. MICHAEL H. GRAVES, JOSEPHINE A. MORELLO, AND FRANK E. KOCKA	1098
Plaque Assay of Rickettsiae in a Mammalian Cell Line. J. CORY, C. E. YUNKER, R. A. ORMSBEE, M. PEACOCK, H. MEIBOS, AND G. TALLENT	1124
Serum Agglutinins in Disease Caused by <i>Mycobacterium intracellulare</i> . DAVID J. DAWSON, E. W. ABRAHAMS, AND ZETA M. BLACKLOCK	1131
Epidemiological Tracing of <i>Pseudomonas aeruginosa</i> : Antibigram and Serotyping. SANDRA L. DAYTON, DIANNA BLASI, DONNA D. CHIPPS, AND R. F. SMITH	1157
Immunofluorescent Identification of Mycoplasma Colonies Grown on Agar-Covered Glass Slides. H. D. LEHMKUHL AND M. L. FREY	1164
Virology and Viral Immunology	
Method for Isolation and Selection of Temperature-Sensitive Mutants of Herpes Simplex Virus. ROBERTO MANSERVIGI	1167
Isolation of <i>Acholeplasma laidlawii</i> from Commercial, Serum-Free Tissue Culture Medium and Studies on Its Survival and Detection. IOLANDA E. LOW	1170
Persistence of Bacteriophages in Experimentally Infected Cell Cultures. HENRY C. ORR, PETER G. PROBST, DEWITT C. LITTLEJOHN, FRED C. CHU, AND JOHN C. PETRICCIANI	1034
Plaque Assay for Avirulent (Lentogenic) Strains of Newcastle Disease Virus. B. LOMNICZI	1046
ERRATA	1105
	1162
	1179



AUTHOR INDEX

VOLUME 28

- Abbott, Bernard J., 58
 Adams, D. M., 793
 Adams, James N., 423
 Aemura, Akinori, 366
 Ahearn, D. G., 723
 Ahmed, Aftab, 326
 Ajello, L., 218
 Alexander, A. D., 505
 Alexander, M., 248, 1084
 Allen, Alfred M., 600
 Amundson, Stanley, 298
 Anderson, Roger L., 778
 Anthony, Darrell W., 885
 Anthony, Nathaniel C., 501
 Antoine, A. D., 41
 Applegate, Kenneth L., 1027
 Appleman, M. D., 460
 Arnold, Wilfred N., 1047
 Arthur, L. O., 1040
 Ash, Ronald J., 26
 Ayres, J. C., 1094
- Baccash, P., 417
 Bacchin, Paolo, 737
 Bachrach, Uriel, 169
 Bachrach, Zelilah, 169
 Back, Arthur F., 392, 400
 Baer, Herman, 618
 Baker, F. L., 708
 Balamuth, William, 64
 Baldwin, Jack N., 86
 Baldwin, K. A., 342
 Balfour, Henry H., Jr., 807
 Bancroft, William H., 600
 Band, R. Neal, 64
 Barach, J. T., 793
 Barksdale, Alma W., 544
 Bartlett, K. H., 35
 Battat, E., 901, 906
 Bell, J. B., 474
 Benjamin, Denis R., 47, 568
 Bergdoll, Merlin, 946
 Bergeron, G., 717
 Berkowitz, David M., 651
 Berryhill, D. L., 1030
 Beuscher, Davis B., 288
 Bianco, S. A., 992
 Bibel, David, 271
 Bigner, Darell D., 156
 Bilimoria, S. L., 133
 Biswal, Nilambar, 239
 Blake, I. G., 439
 Blasi, Dianna, 112
 Blazevic, Donna J., 22, 759
 Blosser, Russell O., 672
 Bohlool, B. B., 11
 Bolin, H., 262
- Bolin, Richard C., 320
 Bond, Walter W., 406, 822
 Border, Maryon M., 730
 Boyd, Karen S., 1047
 Braswell, J. R., 328
 Braude, Abraham I., 298
 Brendle, J. J., 505
 Brennan, K., 668
 Britt, Lois, 320
 Britt, Michael R., 95
 Brock, T. D., 11
 Brown, Bruce L., 518
 Brown, L. R., 753
 Brown, M. W., 1069
 Brown, R. W., 768
 Bryant, Marvin. P., 251, 594, 1018
 Buchanan, Jack R., 589
 Buckley, Sonja M., 319
 Buddemeyer, Edward U., 177
 Bulla, Lee A., Jr., 124, 129
 Bullock, G. L., 811
 Burke, John P., 95
 Butler, M., 530
- Cabelli, V. J., 515
 Cagle, Gerald D., 312
 Caldwell, Daniel R., 456, 1088
 Calisher, Charles H., 881
 Callahan, Lynn T., III, 326
 Camargo, Edwaldo E., 452
 Capone, J. J., 498
 Carbonero, Pilar, 165
 Carpenter, David F., 628
 Carpenter, J. A., 1063
 Carson, Loretta A., 822
 Casals, Jordi, 319
 Casida, L. E., Jr., 951
 Caslow, M., 435
 Cassel, William A., 726
 Castellano, Carmine, 383
 Causey, William A., 193
 Champion, R. A., 723
 Chang, Te Wen, 992
 Chang-Chien, Mei-Mon, 456
 Chen, P. K., 811
 Chen, T. C., 679, 681
 Chen, Y.-K., 892
 Chibata, Ichiro, 117
 Chipley, John R., 1027
 Cho, C. T., 557
 Cho, Hyun J., 897
 Cho, John J., 987
 Christiansen, L. N., 262
 Clark, Maxine J., 641
 Cliver, Dean O., 895
 Coleman, Philip H., 351
- Coltorti, Emilio A., 1
 Colwell, R. R., 185, 977, 982, 1009
 Cook, R. A., 154
 Cook, T. M., 579
 Cook, W. L., 723
 Coriell, Lewis L., 647
 Covert, Scott V., 374
 Crowley, Julia, 943
 Curran, B. J., 276
 Curran, Donald, 655
 Curtis, Roy W., 362
- Daghfous, Toufique, 688
 Dalland, Eli, 856
 Daniels, J. B., 992
 David, Hugo L., 696
 David, Thomas J., 406
 Davis, Charles E., 298
 Dawes, E. A., 999
 Dawson, Chandler R., 688
 Dayton, Sandra L., 112
 Deal, P. H., 1066
 De Jonckheere, J., 159
 Demain, Arnold L., 265
 de St. Jeor, S. C., 145
 Detry, R. W., 733
 DiCuollo, C. J., 995
 Dominik, Joseph W., 929
 Dreesman, Gordon, 239
 Dreyfuss, Mark S., 1027
 Dugan, D. L., 205
 Duncan, C. L., 815
 Duncan, I. B. R., 534
 Dutka, B. J., 474
 Duxbury, J. M., 248
 Dyckman, John D., 431
- Edelman, Charlene K., 807
 Edwards, E. A., 972
 Efthymiou, C. J., 411, 417
 Ehrlich, H. L., 785
 El Kholy, Aziz, 836
 Elliot, J. G., 1063
 Ellner, P. D., 435, 513, 668
 Epstein, D. S., 417
 Evans, James B., 1086
 Evans, Ralph L., 288
- Fare, L. R., 995
 Favero, Martin C., 406
 Favero, Martin S., 822
 Federici, Brian A., 885
 Feng, K. K., 557
 Fernandez De Caleyra, R., 165
 Fields, M. L., 638
 Findley, J., 460
 Fine, D. L., 1040

- Finn, R. K., 181
Firehammer, B. D., 730
Fischer, J. R., 515
Floyd, Julia, 91
Forghani, Bagher, 661
Fortlage, Robert J., 589
Francis, A. J., 248
Fredrickson, A. G., 831
Fujimura, Setsuo, 5
- Gaafar, H. A., 306
Gaafar, Hassan, 1073
Gabridge, Michael G., 774
Galyan, Elizabeth L., 456
Garcia, W. J., 763
Garrison, Robert G., 1047
Gaustad, J. W., 748
Ghiorse, W. C., 785
Gilden, R. V., 100
Gilliland, S. E., 1090
Gjertsen, P., 31
Glassman, Armand B., 943
Goldberg, I., 906
Goode, Ronald L., 86
Gould, Sara, 946
Gray, Samuel B., Jr., 320
Green, James H., 320
Green, Sylvia K., 987
- Haferkamp, Otto, 867
Haines, J. R., 1084
Hald, B., 31
Hamann, A. C., 1076
Hamdy, M. K., 1063
Hankin, Lester, 523
Hansen, S. L., 798
Hanson, Robert P., 802
Harada, Tokuya, 336
Hardesty, D. R., 798
Harding, Gherry, 802
Harrell, William K., 320
Harris, Robert E., 351
Hart, A., 1069
Harwig, Joost, 892
Hatcher, H. J., 748
Hayashi, Takayoshi T. A., 5
Hazard, Edwin I., 885
Hechemy, K., 306
Hechemy, Karim, 1073
Hendricks, Charles W., 572
Herbeck, Janice L., 1018
Hernandez-Lucas, C., 165
Herrmann, John E., 895
Hersch, Paul A., 582
Heymer, Berno, 867
Hill, William F., Jr., 501
Hillman, E. A., 1040
Hinds, D. B., 521
Ho, Monto, 651
Hoadley, A. W., 328
Hoff, John C., 501
Hofstad, T., 856
Holdeman, L. V., 594
Holder, Ian A., 465
- Hollis, D. G., 355
Hoshiwara, Isao, 688
Howard, A. T., 521
Hsieh, D. P. H., 212
Hsieh, Dennis P. H., 52
Hudson, Bruce W., 323
Huebner, Robert J., 614
Huisinigh, Joellen, 489
Huq, Imbadul, 586
Hutchinson, Harriet D., 935
- Iandolo, John J., 510
Ichishima, Eiji, 742
Irwin, Gilbert R., 600
- Jackson, M. J., 474
Jaeger, June, 271
Jakubowski, Walter, 501
Janardan, Konanur G., 605
Johnson, Erious, 513
Jones, Henry E., 271
Joseph, S. W., 411
Jurtshuk, Peter, 1079
- Kakimoto, Toshio, 117
Kalmakoff, J., 133
Kaneko, Tatsuo, 1009
Kasatiya, S. S., 317
Kaufman, Leo, 641
Kautter, Donald A., 722
Kelloff, Gary J., 614
Kennedy, Barry P. C., 892
Kiehn, T. E., 435, 668
King, Robert D., 271
Kirk, B. E., 17
Klein, F., 1040
Knowles, R., 608
Knudsen, Richard C., 326
Ko, Swan Dijien, 347
Koehler, P. E., 1094
Kominos, Spyros D., 987
Konowalchuk, J., 717
Kostenbader, Kenneth D., Jr., 895
Krause, Richard M., 836
Krogh, P., 31
Kunsman, Joseph E., 1088
Kurtzman, C. P., 708
- Labombardi, V. J., 417
Lafleur, Lucette, 469
Lambe, Dwight W., Jr., 561
Lambert, M. A., 80
Lambert, N. G., 317
Lambrow, M., 763
Langford, Edgar V., 897
Larson, Edgar W., 929
Larson, G. L., 972
Larson, Steven M., 452
La Scolea, Leonard J., Jr., 70
Laskin, Allen I., 58
Lasure, Linda L., 544
Lazaroff, Norman, 872
LeBlanc, Armand J., 722
- Lee, Inn Hee, 831
Lee, P. P. Chen, 638
Lee, Wie-Shing, 651
Lennette, Edwin H., 661
Levin, M. A., 515
Levin, R. E., 679, 681
Lillehoj, E. B., 763
Lilly, Timothy, Jr., 722
Lin, Shundar, 288
Lindell, Kermit F., 406
Liston, John, 655
Liu, Kang-chien, 951
Liu, Paul I., 943
Long, Maxine C., 605
Lund, Marlys E., 22
Lynt, Richard K., 722
- Mabee, Michael S., 1027
McCarthy, C. M., 151
McCaskill, Kathy M., 723
McComb, Dorothy E., 727
McCoy, C. J., 58
McDorman, Donald J., 968
McDuff, C. R., 748
McGarrity, Gerald J., 647
McGinnis, M. R., 218
Mack, H. M., 1066
McKay, L. L., 342
Mackowiak, P., 586
MacLowry, James D., 691
Macmillan, Bruce G., 465
McNeill, J. J., 489
Mahony, D. E., 172
Maker, Myron D., 303
Maki, Dennis G., 778
Maki, Leroy R., 456
Makino, Toshikazu, 5
Mallavia, Louis, 713
Mallette, M. F., 999
Maness, Kathryn S. C., 881
Martin, M. L., 481
Martin, Mary L., 713
Masurekar, Prakash S., 265
Matches, Jack R., 655
Mateles, R. I., 901, 906
Matrone, G., 489
Matsen, John M., 22, 672
May, Deborah Charsha, 145
Mayner, Ronald E., 968
Melnick, Joseph L., 232, 861
Merkal, R. S., 276
Merrick, D. L., 106
Merwin, W. H., 80
Mesadi, Mohammed, 688
Meyer, Barbara C., 968
Michaud, G. L., 223
Miller, J. A., 995
Milligan, Thomas W., 1079
Moffatt, Craig M., 95
Molskness, T. A., 753
Moncada, Luz H., 138
Moon, Nancy J., 1076
Moore, W. E. C., 594
Morahan, Page S., 351

- Moss, C. Wayne, 80
 Muirhead, P. A., 439
 Mulkins-Phillips, G. J., 547, 915
 Munnecke, Douglas M., 212
 Munoz, Elaine F., 507, 960
 Myers, B. M., 798
 Myers, Donald M., 1
 Myers, L. L., 730
 Myken, F., 31
- Nagle, Stanley C., 518
 Nagodawithana, Tilak W., 383
 Nathan, Paul, 465
 Nawar, W. W., 679
 Nelson, David R., 258
 Neufeld, R., 608
 Nickerson, Kenneth W., 124, 129
 Niilo, L., 889
 Nishimura, Noriyuki, 117
- Oberhofer, Thomas R., 720
 Obijeski, J. F., 481
 Ohishi, Iwao, 923
 Oliver, James D., 185
 Olpin, J., 100
 Oobayashi, Akira, 742
 Oroszlan, S., 100
 Ottaviano, Paul J., 271
- Padhye, A. A., 218
 Pagano, J. F., 995
 Palmer, E. L., 481
 Palmer, Erskine L., 713
 Parisi, A., 41
 Parisi, Joseph T., 503
 Pariza, Michael W., 510
 Parkinson, A. J., 133
 Parkman, Paul D., 968
 Pazin, George J., 651
 Peleg, Ben-Ami, 1055
 Peters, Robert L., 614
 Petersen, Norman J., 822
 Pettiss, Katherine F., 156
 Plowman, J. K., 1040
 Pontefract, R. D., 717
 Poole, G. M., 154
 Porschen, Richard K., 851
 Puzniak, Constance I., 727
- Queener, S. W., 498
- Rabstein, Louise S., 614
 Ranhand, Jon M., 66
 Ray, C. George, 47, 623
 Reece, Paul, 999
 Reinbold, G. W., 1076
 Rennie, R. P., 534
 Restrepo, Angela, 138
 Reynolds, Marcel C., 406
 Rhodes, R. A., 448, 845
 Richmond, Shirley, 912
- Riley, P. S., 355, 1071
 Robbins, Ruth, 946
 Robertiello, Andrea, 737
 Roberts, Glenn D., 226
 Roberts, T. Richard, 91
 Robertson, E. Arthur, 691
 Romero, Redolfo, 199
 Ron, Nily, 1055
 Rosner, Richard, 245, 644
 Rowen, Joyce W., 720
 Rusmin, Simon, 347
 Russell, A. D., 331
 Russell, Philip K., 600
- Sacks, Henry S., 374
 St. Julian, Grant, 129
 Sakaguchi, Genji, 923
 Salanitro, J. P., 439
 Saldick, Jerome, 1004
 Salsbury, R. L., 106
 Sandine, W. E., 753
 Sands, D. C., 523
 Schaefer, J. O., 151
 Schaeffer, David J., 605
 Schaffer, F. L., 280
 Scherer, R. K., 768
 Schipper, I. A., 1030
 Schleifer, Karl H., 867
 Schmidt, Nathalie J., 392, 400, 661
 Schoutens, E., 525
 Schreckenberger, Paul C., 759
 Schreiber, Minnie, 618
 Schroth, Milton N., 987
 Schwarz, J. R., 977, 982
 Schwert, David P., 1082
 Scott, Peter M., 892
 Seawright, Gary L., 802
 Self, Donnie J., 156
 Sell, Kenneth W., 326
 Shaparis, A. B., 262
 Sharpe, A. N., 223
 Shibatani, Takeji, 117
 Shulman, Jonas A., 778
 Silverman, Gerald J., 628
 Silverman, Melvin P., 507, 960
 Simpson, S., 608
 Smiley, J. J., 708
 Smith, Rodney F., 112, 359
 Sobsey, Mark D., 232, 861
 Soergel, M. E., 280
 Sommer, Noel F., 589
 Sompolinsky, David, 912
 Songer, J. Glenn, 359
 Sørensen, K. J., 553
 Souza, K. A., 1066
 Spahn, Gerard J., 614
 Spaulding, Earle H., 851
 Speck, M. L., 793, 1090
 Speirs, J. I., 717
 Spindler, Joyce A., 672
 Spira, Gad, 239
 Sroka, Jean, 1073
 Staneck, Joseph L., 226
- Stanton, G. John, 145
 Steiner, Michael, 872
 Steinkraus, Keith H., 383
 Stevens, Roy, 1073
 Stevens, R. W., 306
 Stevenson, Walter R., 362
 Stewart, James E., 547, 915
 Still, P. E., 733
 Stoenner, Herbert G., 540
 Stuckey, H. M., 811
 Sudo, Sara Z., 582
 Sugimoto, Toshiyuki, 336
 Sullivan, James D., Jr., 1023
 Switzer, R. E., 1086
- Talbot, Henry W., Jr., 503
 Tanabe, Osamu, 742
 Teh, J. S., 840
 Tepper, Byron S., 452
 Thatcher, Robert C., 887
 Thayer, D. W., 700
 Thomas, Frederick C., 802
 Thomas, S., 331
 Toma, S., 469
 Tompkin, R. B., 262
 Traci, P. A., 815
 Trieft, N. M., 359
 Trowbridge, R. S., 366
 Trust, T. J., 35, 340
 Tschider, S. R., 1030
 Tsuchiya, H. M., 831
 Tuite, John, 362
 Turnbull, C. E., 1066
 Tyler, J. E., 181
 Tzianabos, T., 481
- Valenta, J. R., 995
 van de Voorde, H., 159
 Van Dijck, P., 159
 Varel, Vincent H., 251, 594
 Varela-Díaz, Victor M., 1
 Vassall, John H., II, 623
 Vastine, David W., 688
 Vela, G. R., 77
 Viglia, Aurelio, 737
 Vitanza-Jack, Vilma B., 987
 Voll, M. J., 579
- Wagner, Henry N., Jr., 452
 Walker, J. D., 982
 Wallis, Craig, 232, 861
 Wannamaker, Lewis W., 836
 Washington, John A., II, 303
 Wasilauskas, Benedict L., 91
 Watson, Stanley W., 1023
 Weaver, R. E., 355, 1071
 Weaver, Terry L., 887
 Webster, Janice M., 17
 Weiner, B. A., 448, 845
 Weiner, R. M., 579
 Welkos, Susan, 618
 Wende, Reuben D., 431
 White, James P., 1082

Wiebe, W. J., 1033
Wildfeuer, Alexander, 867
Wilkinson, Hazel W., 199
Willhight, Milton, 600
Williams, Robert P., 431
Windsor, G. D., 530
Wolff, Katherine L., 323
Wreghitt, T. G., 530

Wright, D. N., 205
Wu, M. T., 1094
Yao, Raymond C., 52
Yee, Robert B., 651
Yen, T. F., 460
Yetka, J. E., 1033
Yokoyama, Sadaji, 742

Yoneda, Chieko, 688
Young, Frank E., 70
Young, Harold W., 929
Young, Nancy P., 26
Yourassowsky, E., 525
Zeikus, J. G., 258
Ziegler, Donald W., 935

SUBJECT INDEX

VOLUME 28

- Acetamide agar
 - nonfermentative bacteria, differentiation, 720
- Acetylene reduction
 - by *Klebsiella* isolated from effluents, 608
 - by pulp and paper mill effluents, 608
- Achlya heterosexualis*
 - hormone B production, 544
- Achromobacter* from fishery sources
 - phenethyl alcohol production, 681
- Acid carboxypeptidase
 - P. janthinellum* IFO-8070, 742
- Acinetobacter calcoaceticus*, composition
 - effect of growth rate and nutrient limitation, 58
- Acinetobacter*, non-saccharolytic strains
 - nitrate reduction, 1071
- Acriflavine treatment
 - S. lactis* Lac⁻ mutants, 753
- Adenoviruses, serotyping
 - immune electron microscopy, 623
- Adhesive tape
 - nosocomial bacteria, 651
- Aerobic actinomyces, identification
 - thin-layer chromatography, 226
- Aflatoxin biosynthesis, pathway
 - dichlorvos inhibition, 52
- Alpha-glucosidase, formation
 - Pseudomonas* SB15, 336
- Alpha-toxins, purified
 - S. aureus*, 86
- Anaerobic bacteria
 - biochemical testing, rapid method, 759
- Anaerobic cocci, gram-positive
 - fluorescent antibody study, 851
- Antibiotics
 - respiratory inhibitors of bacterial populations, 1033
- Antimicrobial agents, zonal concentration gradient
 - bacterial colonies, 525
- API Enteric 20 Profile Register
 - analysis using a computer diagnostic model, 691
- Arboviruses, California group
 - microculture plaque neutralization test, 802
- Arthrobacter globiformis*
 - phage in soil, 951
- Ascitic fluids
 - mouse interferon, 319
- Aspergilli and penicillia, toxigenic
 - aged, cured meats, 1094
- Aspergillus flavus*
 - infection in corn, 763
- Aspergillus niger*
 - malformin in onion bulbs, 362
- Atmosphere
 - monitoring in an anaerobic chamber, 582
- Automated microtransfer
 - poliovirus and mumps virus neutralizing antibodies, assay, 968
- Automated reagin test
 - color-coded antigen, 317
- Autotrophic bacteria
 - iron oxidation, determination, 872
- Azotobacter*
 - survival in dry soil, 77
- Bacillus*, marine
 - MnO₂-reductase activity, 785
- Bacillus pumilus*, vegetative
 - radiation resistance, 41
- Bacillus stearothermophilus*
 - in Icelandic soils, 638
- Bacillus thuringiensis*
 - carbohydrate metabolism, radiorespirometric survey, 129
 - minimal nutritional requirements, 124
- BACTEC system
 - bacteremia detection, 435
- Bacteremia detection
 - BACTEC system, 435
- Bacteria, disruption
 - simple, inexpensive procedure, 66
- Bacterial colonies
 - count and size evaluation, 525
- Bacterial extracellular polymer, determination
 - critical-point drying, 312
- Bacterial growth
 - effect of dispersants on crude oil, 547
- Bacterial identification
 - quantitative infrared photoanalysis, 205
- Bacterial respiration
 - antibiotics as inhibitors, 1033
- Bacterial spores, soil
 - thermoradiation inactivation, 406
- Bacterial toxins, microassay
 - multiple automated sample harvester, 326
- Bacteriocin typing schema
 - C. perfringens*, 172
- Bacteriophage isolation
 - from lysogenic bacteria, 503
 - improved rapid plate method, 503
- Bacteriuria, miniature test
 - use of dehydrated media and nitrite pads, 95
- Bacteroides fragilis*
 - growth at controlled pH, 856
- Bacteroides fragilis* subsp. *fragilis*
 - nutritional features, 251
- Bacteroides melaninogenicus* serogroups
 - determination by FA staining, 561
- Bacteroides* species, rumen
 - sphingolipid content, 1088
- BBL Minitek system
 - Enterobacteriaceae*, identification, 798
- Beta-hemolytic streptococci
 - extraction procedure for serological grouping, 836

- grouping directly on sheep blood agar plates,
new method, 972
- Biochemical tests
 anerobic bacteria, 759
- Biophysical-immunological assay
 RNA type C viruses, 100
- Blood cultures
 macroscopic, microscopic, and radiometric
 exams, 641
- Blood culture systems, evaluation
 use of parallel culture methods, 245
- Borrelia hermsii*
 biology in Kelly medium, 540
- Bovine feces
 group D streptococci, enumeration, 1086
- Bovine mycoplasma antigens
 detection by counterimmunoelectrophoresis, 897
- Bovine omasum
 FMDV growth, 1055
- Brewer's yeasts
 inhibition by wheat purothionin, 165
- Brucella canis* antibodies
 gel-diffusion and tube agglutination tests, 1
- Bunker C oil
 bacterial degradation, 915
- Burn wound infection
 effect of a synthetic dressing, 465
- Burn wound specimens
 selective isolation of yeasts, 112
- [¹⁴C]aflatoxin
 tissue distribution and metabolism, 1027
- California (La Crosse) encephalitis
 diagnosis by precipitin techniques, 807
- Campylobacter fetus* (*Vibrio fetus*)
 tube culture method for viable counts, 730
- Carbohydrate metabolism
 B. thuringiensis, 129
- Carotenoid pigments
 M. kansasii, 696
- C₁ compounds
 Pseudomonas C, growth, 906
- Cecal microflora, commercial broiler chickens, 439
- Cerebrospinal fluid
 gas-liquid chromatography, 298
- Chesapeake Bay microflora
 computer program to follow fluctuations, 185
- Chlamydia trachomatis*
 growth in Cyt B-treated McCoy cells, 912
 micro cell culture method, 727
- Cholera vibrio biotype
 rapid method for determination, 586
- Citrobacter*, H₂S-negative
 biochemical and antibiotic susceptibility
 studies, 22
- Cladosporium resinae*
 short-chain fatty acids and alcohols, toxicity,
 840
- 8-Class type tallying device and counter, 423
- Clostridium botulinum*
 in crabmeat from the blue crab, 722
- Clostridium botulinum* type E toxin
 molecular weight, 374
- Clostridium botulinum* progenitor toxin
 purification, 923
- Clostridium pasteurianum*
 growth as function of sulfate concentration, 999
- Clostridium perfringens*
 bacteriocin susceptibility, 172
 cold shock lethality and injury, 815
 in the environment, 655
- Clostridium perfringens* enterotoxin
 ligated intestinal loops in chickens, 889
- Clostridium perfringens* spores, heated
 recovery on selected media, 793
- Coal refuse material
 T. acidophilus ecology, 11
- Coccidioidomycosis, diagnosis
 CF and ID tests, concomitant use, 641
- Coenzyme A
 S. lutea, 117
- Cold shock lethality
 C. perfringens, 815
- Coliform organisms
 recovery on Gelman and Millipore filters, analy-
 sis, 605
 radiometric method for detection, 169
- Common urease tests
 failure in isolation of *P. productus*, 594
- Complement fixation and immunodiffusion tests
 coccidioidomycosis, diagnosis, 641
- Complement-fixing antigen
 R. rickettsii, 481
- Computer diagnostic model
 API Enteric 20 Profile Register, analysis, 691
- Continuous culture
 media optimization, 901
- Corynebacterial kidney disease
 salmonids, 811
- Corynebacterium*
 n-decane oxidation products, 737
- Critical-point drying
 bacterial extracellular polymer, determination,
 312
- Crude oil
 biodegradation and growth of bacteria, 547
- Cyanuric acid biodegradation, 1004
- Cytochalasin B
 McCoy cells, 912
- Deep-sea bacteria
 hydrocarbons, growth and utilization, 982
- Degradation, bacterial
 Bunker C and crude oils and hydrocarbons, 915
- Dehydrated media
 miniature test for bacteriuria, 95
- Desulfovibrio* species
 sulfate reduction, 489
- Dethiomethylation of methionine
 vitamin B₆ involvement, 106
- Diauxic growth
 P. shermanii, 831
- 2,4-Dichlorophenoxyacetic acid
 pseudomonad, growth rate, 181
- Dichlorvos inhibition
 aflatoxin biosynthesis, pathway, 52
- Diketopiperazine formation
 P. italicum, 892
- Dimethylselenide
 evolution from soils, 248

- Disinfection
 holding-tank sewage, 861
 Dissolved oxygen conditions, controlled
 enterotoxin B and nuclease production, 628
 Dressing, synthetic
 control of wound infection, 465
 Drought, prairie
 microbial response, 700

 Ehrlich ascites tumor preservation
 simple method, 726
 Electrical conductivity of soil solutions
 extraterrestrial life, detection, 960
 Electrophoresis
 differentiation of staphylococcal and micro-
 coccal proteinases, 768
 Endotoxin detection
 Limulus test, 867
 Enteric viruses
 concentration from water with lettuce extract,
 717
Enterobacteriaceae, identification
 BBL Minitek system, evaluation, 668, 798
 Enterococci in cheese
 isolation and differentiation, 417
 Enterotoxigenicity
 S. aureus strains, 946
 Enterotoxin B and nuclease production
 controlled dissolved oxygen conditions, 628
 Enteroviruses in lake water, 895
 Epoxy-fiberglass absorbent
 virus concentration, 501
 Epstein-Barr virus
 from P3HR-1 cells, 518
Escherichia coli
 H₂S-producing variants, 303
 recovery from chlorinated secondary sewage,
 328
Escherichia coli antibody
 latex test, 1073
Escherichia coli antigens
 latex agglutination test, 306
 Eutrophication
 sewage treatment, 359
 Extraterrestrial life, detection
 changes in electrical conductivity of soil solu-
 tions, 960

 Fatty acids, bacterial
 methods for analysis, comparison, 80
 Feedlot waste
 indigenous organisms, growth, 448
 Feedlot waste filtrate
 fermentation by fungi and streptomycetes, 845
 Filters
 coliform organisms, recovery, 605
 Fish water
 potential pathogens, occurrence, 35
 Flat gel polyacrylamide electrophoresis
 porcine mycoplasmas, 530
 Fluorescence microscopy
 high-quality microphotographs, 1063
 Fluorescent antibody staining
 B. melaninogenicus serogroups, 561
 Fluorescent antibody study
 gram-positive anaerobic cocci, 851
 Food and feed enrichment
 lactobacilli, lysine-excreting mutants, 523
 Foot-and-mouth disease virus
 growth in bovine omasum, 1055
 Fungi
 feedlot waste filtrate, fermentation, 845
 Fungi and yeasts
 water-stored cultures, 218

 Gaseous end products, anaerobic metabolism
 radioisotopic analysis, 258
 Gas-liquid chromatography
 analysis of sugars in cerebrospinal fluid, 298
 fatty acid analysis, 80
 Gel-diffusion and tube agglutination tests
 B. canis antibody detection, 1
 Glutaraldehyde
 sporicidal activity, 331
 Gnotobiotic salmonid fish, hatching, 340
 Gonococcal Genetic Medium
 N. gonorrhoeae, growth, 70
 Gonorrhea, low incidence
 Gonosticon Dri Dot test, 431
 Gonosticon Dri Dot test, evaluation
 gonorrhea, low incidence, 431
 Group B streptococci, identification
 immunofluorescence staining, 199
 Group D streptococci
 enumeration in bovine feces, 1086
 Growth rate
 composition and biomass yield of *A. calcoaceti-*
 cus, effect, 58

Haemophilus species
 media for isolation, 688
 Hemadsorption inhibition
 microadaptation, 547
 Hemin
 growth requirement for *Naegleria*, 64
 Hemodialysis machines
 microbial contamination of fluids, 822
 Hepatitis B antigen
 radioimmunoassay, specificity, 600
 Herpes simplex virus strains, typing
 indirect immunoperoxidase method, 568
Herpesvirus hominis
 IHA tests, 392
 solid phase radioimmunoassay, 661
Herpesvirus hominis, antibodies and isolates
 typing by IHA inhibition, 400
 Heterotrophic and enteric bacteria
 sorption to glass surfaces, 572
 High-molecular-weight alkanes
 microbial degradation, 1084
 Homocitrate synthase
 P. chrysogenum extracts, 265
 Homogeneous spore suspensions
 method for preparation, 498
 Hormone B production
 A. heterosexualis, 544
 Hydrocarbons
 growth at ambient and in situ pressure, 982
 Hydrogen sulfide-producing colonies
 Tergitol-7 agar for differentiation, 521

- Hydrogen-sulfide producing variants
 E. coli, 303
- Hydrophobic grid-membrane filters
 improved microbiological enumeration, 223
- Hydrostatic pressure
 effect on *V. parahaemolyticus*, 977
- ¹²⁵I- and [³H]acetate-labeled antibodies
 iridescent virus detection, 133
- Ice nucleation
 P. syringae, 456
- Immune electron microscopy
 adenoviruses, serotyping, 623
- Immunodiffusion test for paracoccidioidomycosis
 characterization of precipitin bands, 138
- Immunofluorescence staining
 group B streptococci, identification, 199
- Immunofluorescent cell-counting assay
 lymphocytic choriomeningitis virus, 17
- Immunoperoxidase
 myxoviruses and paramyxoviruses, identification, 47
- Inactivation
 MVM stability, 351
- Indigenous organisms, growth
 feedlot waste, 448
- Indirect fluorescent-antibody technique
 Naegleria sp., 159
- Indirect hemagglutination inhibition
 H. hominis, typing, 400
- Indirect hemagglutination tests
 H. hominis types 1 and 2, 392
- Indirect immunoperoxidase method
 herpes simplex virus strains, typing, 568
- Infectious bovine rhinotracheitis virus
 membrane concentration, 1030
- Infrared photoanalysis
 bacterial identification, 205
- Interferon, mouse
 ascitic fluids, 319
- Intravenous infusion fluid
 in-use contamination, 778
- In-use contamination
 i.v. infusion fluid, 778
- In vitro metabolism
 radiometric measurement, 177
- Iodinated globulins
 preparation for RIA, 935
- Iridescent virus detection
 ¹²⁵I- and [³H]acetate-labeled antibodies, 133
- Iron oxidation
 determination by autotrophic bacteria, 872
- Isoamylase, formation
 Pseudomonas SB15, 336
- Isolation of yeasts, selective
 evaluation of media, 112
- Kelly medium
 B. hermsii, biology, 540
- Klebsiella*
 acetylene reduction, 608
 biochemical and serological typing, 534
 natural receiving waters, 672
- Lactobacilli*, lysine-excreting mutants
 use in food and feed enrichment, 523
- Lactobacillus bulgaricus*
 recovery on agar media, 1076
- Lac⁺ transductants
 S. lactis, 753
- Laminar flow biological safety cabinet, modified,
 647
- Latex agglutination test
 E. coli antigens, detection, 306
- Latex test
 E. coli antibody, determination, 1073
- Leptospira biflexa*
 bacteriological media, contamination, 505
- Limulus* lysate
 factors affecting sensitivity, 1023
- Limulus* test
 endotoxin detection, 867
- Liquid scintillation radioassay
 disposable microcentrifuge tubes, 280
- Liquid scintillation vial
 in vitro metabolism, measurement, 177
- Lymphocytic choriomeningitis virus
 immunofluorescent cell-counting assay, 17
- McCoy cells
 C. trachomatis, growth, 912
- Maidi-progressive pneumonia-visna viruses
 plaque assay, 366
- Malformin
 A. niger-infected onion bulbs, 362
- Malting and brewing experiments
 fate of ochratoxin A and citrinin, 31
- Manganese dioxide-reductase activity
 seawater cations and temperature, effects, 785
- Manganous chloride
 rubella hemagglutination inhibition, 992
- Media optimization
 use of continuous culture, 901
- Membrane filters
 autoclave and ethylene oxide-sterilized, comparison, 474
- Metabolic activity
 M. lepraemurium, 452
- Methane-oxidizing bacteria
 gas metabolism and growth, concurrent measurement, 507
- Microbial contamination of fluids, 822
- Microbial ecology, fluctuations
 computer program, 185
- Microbial transformation
 methyl 5(6)-butyl-2-benzimidazolecarbamate, 995
- Microbiological enumeration, improved
 hydrophobic grid-membrane filters, 223
- Microcentrifuge tubes, disposable
 liquid scintillation radioassay, applications, 280
- Microculture plaque neutralization test
 California-group arboviruses, 802
- Microorganisms
 growth under extremely alkaline conditions, 1066
- Microorganisms, critical-point drying
 specimen holder for SEM, 708

- Milk cultures
S. aureus and *S. typhimurium*, 1090
- Minitek system
Enterobacteriaceae, identification, 668
- Minute virus, mice
 stability to chemical and physical agents, 351
- Modified spinning top spray apparatus
 respiratory disease studies, 929
- Molecular weight
C. botulinum type E toxin, 374
- Moraxella urethralis*
 59 strains, characterization, 355
- Mouse mammary tumor virus
 production, in vitro system, 1040
- Multiple automated sample harvester
 bacterial toxins, microassay, 326
- Mumps virus neutralizing antibodies
 automated microtransfer, 968
- Murine leukemia viruses, detection
 in vivo assay, 614
- Murine sarcoma-leukemia virus group-specific
 antigen
 radioimmunoassay, 239
- Mycobacterium avium*
 response to UV irradiation, 151
- Mycobacterium chelonae* subspecies *abscessus*
 isolation from pus, 943
- Mycobacterium kansasii*
 carotenoid pigments, 696
- Mycobacterium lepraemurium*
 metabolic activity, 452
- Mycobacterium paratuberculosis*
 growth and metabolic characteristics, 276
- Myxoviruses and paramyxoviruses
 identification by using immunoperoxidase, 47
- Naegleria*
 hemin as growth requirement, 64
- Naegleria* sp., identification
 indirect fluorescent-antibody technique, 159
- Nalidixic acid enrichment
S. typhimurium, 579
- Natural receiving waters
Klebsiella isolates, 672
- n-Decane oxidation products
Corynebacterium cultures, 737
- Neisseria gonorrhoeae*, growth
 defined minimal medium, 70
- Neisseria* species
 TMPD oxidase reaction, 1079
- Newcastle disease virus infection
 viral envelope, influence, 26
- Nitrate reduction
Acinetobacter, 1071
- Nitrification, in situ measurement, 1082
- Nocardia caviae*
 new isolations, 193
- Nonfermentative bacteria
 acetamide agar for differentiation, 720
- Non-immunological precipitation of serum
 by SDS in agar diffusion, 557
- Nosocomial bacteria
 adhesive tape, 651
- Nutritional requirements
B. fragilis subsp. *fragilis*, 251
- O-1 bacteriophage
Salmonella identification, 618
- Ochratoxin A and citrinin
 fate during malting and brewing experiments, 31
- Oil shale, degradation
 sulfur-oxidizing bacteria, 460
- Paper-strip blood-sampling technique
 antibody to *Y. pestis*, detection, 323
- Parabiotic chamber for organ cultures, improved,
 774
- Parathion
 decontamination in aqueous media, 212
- Parbendazole
 microbial transformation, 995
- Pathogens, potential
 occurrence in fish water, 35
- Patulin production
P. expansum, 589
- Penicillium chrysogenum*
 homocitrate synthase, insensitivity, 265
- Penicillium expansum*
 patulin production, 589
- Penicillium italicum*
 diketopiperazine formation, 892
- Penicillium janthinellum*
 acid carboxypeptidase, submerged production,
 742
- Penicillium stoloniferum* virus
 concentration by polyethylene glycol, 733
- Peptostreptococcus productus*, ureolytic
 isolation from feces using defined medium, 594
- Periplasmic bodies
S. rouxii (Boutroux), 1047
- pH, controlled
B. fragilis growth, 856
- Phenethyl alcohol production
Achromobacter from fishery sources, 681
- P3HR-1 cells
 Epstein-Barr virus, 518
- Pig hemagglutinating encephalomyelitis virus
 hemadsorption inhibition, microadaptation, 553
- Plant and soil reservoirs
P. aeruginosa, 987
- Plaque assay
 maldi-progressive pneumonia-visna viruses, 366
- p-Nitrophenol
 decontamination in aqueous media, 212
- Poliovirus neutralizing antibodies
 automated microtransfer, 968
- Polyethylene glycol
P. stoloniferum virus, concentration, 733
- Porcine mycoplasmas
 flat gel polyacrylamide electrophoresis, 530
- Potassium sorbate
 effect on salmonellae, 262
- Precipitin bands, characterization
 immunodiffusion test for paracoccidioidomy-
 cosis, 138

- Precipitin techniques
California (La Crosse) encephalitis, diagnosis, 807
- Propionibacterium shermanii*
diauxic growth, 831
- Propylene oxide
sterilizing agent, 1069
- Proteinase- and lactose-utilizing enzymes
S. lactis, 342
- Proteinases, staphylococcal and micrococcal
differentiation by electrophoresis, 768
- Pseudomonad
growth on 2,4-dichlorophenoxyacetic acid and 2,4-dichlorophenol, 181
- Pseudomonas aeruginosa*
plant and soil reservoirs, 987
- Pseudomonas C*
growth on C₁ compounds, 906
- Pseudomonas SB15*
isoamylase and α -glucosidase, formation, 336
- Pseudomonas syringae*
ice nucleation, 456
- Radiation resistance
vegetative *B. pumilus*, 41
- Radioimmunoassay
hepatitis B antigen, 600
iodinated globulins, 935
murine sarcoma-leukemia virus gs antigen, 239
- Radioisotopic analysis
gaseous end products of anaerobic metabolism, 258
- Respiratory disease studies
use of modified spinning top homogeneous spray apparatus, 929
- Rhizopus oligosporus*
inoculum for tempeh fermentation, 347
- Ribonucleic acid type C viruses
biophysical-immunological assay, 100
- Rickettsia akari*
ultrastructure, 713
- Rickettsia-like* organism
infection of freshwater amphipod, 585
- Rickettsia prowazeki*
ultrastructure, 713
- Rickettsia rickettsii*
complement-fixing antigen, 481
- River water, continuous culture
heterotrophic and enteric bacteria, sorption, 572
- Rubella hemagglutination inhibition
nonspecific agglutination removal, 992
- Ruminococcus bromii*
nutritional features, 1018
- Saccharomyces cerevisiae*
effect of dissolved oxygen, cell count, and sugar concentration, 383
viability in rapid fermentations, 383
- Saccharomyces rouxii*
periplasmic structure, 1047
- Salmonella*
identification with O-1 phage, 618
- Salmonellae*
potassium sorbate, effect, 262
- Salmonella enteritidis*
isolation from eutrophic regions of a freshwater lake, 723
- Salmonella O* and *Shigella* antisera, preparation
reuse of *Salmonella* and *Shigella* absorbing cells, 320
- Salmonella typhimurium*
nalidixic acid enrichment, 579
- Salmonid roe, sterility, 340
- Salmonids
corynebacterial kidney disease, causative bacterium, 811
- Sampling technique, large volume, 515
- Sarcina lutea*
coenzyme A, production, 117
- Scanning electron microscopy
microorganisms, critical-point drying, 708
- Seasonal conjunctivitis cases
Haemophilus isolation, 688
- Selective enterococcus medium
manganese ion deficiency, sodium azide, and alkaline pH, 411
- Serological grouping
beta-hemolytic streptococci, 836
- Serotyping
Klebsiella isolates, 534
- Serratia* species
distribution in clinical specimens, 513
- Sewage, holding tank
chemical disinfection, 861
- Sewage treatment
controlled eutrophication, 359
- Sheep blood agar plates
grouping beta-hemolytic streptococci, 972
- 5% Sheep blood agar plates, preparation
sodium polyanethol sulfonate, 91
- Silica gel media, preparation
simplified method, 887
- Sodium dodecyl sulfate
non-immunological precipitation of serum, 557
- Sodium polyanethol sulfonate
5% sheep blood agar plates, preparation, 91
- Soil
A. globiformis phage, 951
- Solid phase radioimmunoassay
H. hominis, identification, 661
- Solid waste landfill leachates
viruses, detection, 232
- Sphingolipid content
rumen *Bacteroides* sp., 1088
- Sporeforming bacteria, physiology, 124, 129
- Sporicidal activity
glutaraldehyde, 331
- Staphylococcus aureus*
enterotoxigenicity detection, 946
purified alpha-toxins, comparison, 86
selected typing bacteriophages, genome size, 510
staphylokinase, complex form, 5
- Staphylokinase, complex form
occurrence in *S. aureus*, 5
- Streptococci, lactic
antagonism toward *S. aureus* and *S. typhimurium* in milk cultures, 1090
- Streptococcus lactis*

- lac⁻ prt⁻* mutants, 342
- LAC⁺ transductants, 753
- Streptococcus thermophilus*
 - recovery on agar media, 1076
- Sulfate concentration
 - function of *C. pasteurianum* growth, 999
- Sulfate reduction
 - Desulfovibrio* species from sheep rumen, 489
- Sulfur-oxidizing bacteria
 - oil shale, degradation, 460
- Surface disinfectants
 - virucidal efficacy, 748
- Susceptibility studies, biochemical and antibiotic
 - H₂S-negative *Citrobacter*, 22
- Syphilis
 - automated reagin test, 317
- Tempeh fermentation
 - rice-grown *R. oligosporus*, 347
- Tetramethyl-*p*-phenylenediamine oxidase reaction
 - Neisseria* sp., 1079
- Thermoplasma acidophilum*
 - ecology in coal, 11
- Thermoradiation inactivation
 - spores in soil, 406
- Thin-layer chromatography
 - aerobic actinomycetes, 226
- Tissue distribution
 - [¹⁴C]aflatoxin in chickens, 1027
- Trace element levels
 - A. flavus* infection and aflatoxin production in corn, 763
- Trichophytin extraction
 - T. mentagrophytes* grown in a complex and a defined medium, comparison, 271
- Trichophyton mentagrophytes*
 - trychophytin extraction, 271
- Trypsin solutions, sterile filtered and heat-sterilized
 - factors influencing activity, 154
- Venezuelan equine encephalomyelitis virus
 - virulence for laboratory hosts, 881
- Vibrio parahaemolyticus*
 - distribution in Atlantic Ocean, 1009
 - hydrostatic pressure, effect, 977
- Viral envelope
 - Newcastle disease virus infection, 26
- Viral infectivity assays
 - staining and eliminating focus formation, improved, 156
- Virucidal efficacy
 - three common liquid surface disinfectants, 748
- Virus detection
 - solid waste landfill leachates, 232
- Vitamin B₆
 - dethiomethylation of methionine, 106
- Volatile compounds, high boiling
 - produced during storage of haddock fillets, 679
- Water quality
 - Spoon River, bacteriological assessment, 288
- Water storage
 - fungi, yeasts, and aerobic actinomycetes, 218
- Western equine encephalitis virus plaque variants
 - detection in crowded cultures and plaque progeny, 145
- Wheat purothionins
 - inhibition of brewer's yeasts, 165
- Yersinia enterocolitica* infection
 - isolation, in Canada, 469
- Yersinia pestis* antibody, detection
 - paper-strip blood-sampling technique, 323

INDEX TO DATE OF ISSUE

Month	Date of Issue	Pages
July	31 July 1974	1-157
August	27 August 1974	159-330
September	30 September 1974	331-524
October	25 October 1974	525-735
November	23 November 1974	737-899
December	3 January 1975	901-1096

APPLIED MICROBIOLOGY

VOLUME 28

BALTIMORE, MD. 21202

1974

Environmental Microbiology and Ecology

- Immunofluorescence Approach to the Study of the Ecology of *Thermoplasma acidophilum* in Coal Refuse Material. B. B. BOHLOOL AND T. D. BROCK. 11
- Occurrence of Potential Pathogens in Water Containing Ornamental Fishes. T. J. TRUST AND K. H. BARTLETT. 35
- Survival of *Azotobacter* in Dry Soil. G. R. VELA. 77

Food Microbiology and Toxicology

- Fate of Ochratoxin A and Citrinin During Malting and Brewing Experiments. P. KROGH, B. HALD, P. GJERTSEN, AND F. MYKEN. 31

Metabolism and Products

- Occurrence of a Complex Form of Staphylokinase in the Course of Cultivation of *Staphylococcus aureus*. SETSUO FUJIMURA, TOSHIKAZU MAKINO, AND TAKAYOSHI T. A. HAYASHI. 5
- Increased Radiation Resistance of Vegetative *Bacillus pumilus*. A. PARISI AND A. D. ANTOINE. 41
- Step of Dichlorvos Inhibition in the Pathway of Aflatoxin Biosynthesis. RAYMOND C. YAO AND DENNIS P. H. HSIEH. 52
- Effect of Growth Rate and Nutrient Limitation on the Composition and Biomass Yield of *Acinetobacter calcoaceticus*. BERNARD J. ABBOTT, ALLEN I. LASKIN, AND C. J. MCCOY. 58
- Hemin Replaces Serum as a Growth Requirement for *Naegleria*. R. NEAL BAND AND WILLIAM BALAMUTH. 64
- Simple, Inexpensive Procedure for the Disruption of Bacteria. JON M. RANHAND. 66
- Comparison of Rapid Methods for Analysis of Bacterial Fatty Acids. C. WAYNE MOSS, M. A. LAMBERT, AND W. H. MERWIN. 80
- Involvement of Vitamin B₆ in the Dethiomethylation of Methionine by Rumen Microorganisms. D. L. MERRICKS AND R. L. SALSBUURY. 106
- Production of Coenzyme A by *Sarcina lutea*. NORIYUKI NISHIMURA, TAKEJI SHIBATANI, TOSHIO KAKIMOTO, AND ICHIRO CHIBATA. 117
- Physiology of Sporeforming Bacteria Associated with Insects: Minimal Nutritional Requirements for Growth, Sporulation, and Parasporal Crystal Formation of *Bacillus thuringiensis*. KENNETH W. NICKERSON AND LEE A. BULLA, JR. 124
- Physiology of Sporeforming Bacteria Associated with Insects: Radiorespirometric Survey of Carbohydrate Metabolism in the 12 Serotypes of *Bacillus thuringiensis*. KENNETH W. NICKERSON, GRANT ST. JULIAN, AND LEE A. BULLA, JR. 129

Clinical Microbiology and Immunology

- Comparative Sensitivity of Gel-Diffusion and Tube Agglutination Tests for the Detection of *Brucella canis* Antibodies in Experimentally Infected Dogs. DONALD M. MYERS, VICTOR M. VARELA-DÍAZ, AND EMILIO A. COLTORTI. 1
- Biochemical and Antibiotic Susceptibility Studies of H₂S-Negative *Citrobacter*. MARLYS E. LUND, JOHN M. MATSEN, AND DONNA J. BLAZEVIC. 22
- Development of a Defined Minimal Medium for the Growth of *Neisseria gonorrhoeae*. LEONARD J. LA SCOlea, JR., AND FRANK E. YOUNG. 70
- Comparison of Purified Alpha-Toxins from Various Strains of *Staphylococcus aureus*. RONALD L. GOODE AND JACK N. BALDWIN. 86
- Use of Sodium Polyanethol Sulfonate in the Preparation of 5% Sheep Blood Agar Plates. BENEDICT L. WASILAUSKAS, JULIA FLOYD, AND T. RICHARD ROBERTS. 91
- Evaluation of Miniature Test for Bacteriuria Using Dehydrated Media and Nitrite Pads. CRAIG M. MOFFAT, MICHAEL R. BRITT, AND JOHN P. BURKE. 95
- Evaluation of Media for Selective Isolation of Yeasts from Oral, Rectal, and Burn Wound Specimens. RODNEY F. SMITH, DIANNA BLASI, AND SANDRA L. DAYTON. 112

Characterization of the Precipitin Bands Detected in the Immunodiffusion Test for Paracoccidioidomycosis. ANGELA RESTREPO AND LUZ H. MONCADA	138
Response of <i>Mycobacterium avium</i> to Ultraviolet Irradiation. C. M. MCCARTHY AND J. O. SCHAEFER	151

Virology and Viral Immunology

Immunofluorescent Cell-Counting Assay for Lymphocytic Choriomeningitis Virus. JANICE M. WEBSTER AND B. E. KIRK	17
Influence of Viral Envelope on Newcastle Disease Virus Infection. NANCY P. YOUNG AND RONALD J. ASH	26
Use of Immunoperoxidase for the Rapid Identification of Human Myxoviruses and Paramyxoviruses in Tissue Culture. DENIS R. BENJAMIN AND C. GEORGE RAY ..	47
Biophysical-Immunological Assay for Ribonucleic Acid Type C Viruses. J. OLPIN, S. OROSZLAN, AND R. V. GILDEN	100
Comparative Study of [¹²⁵ I]- and [³ H]Acetate-Labeled Antibodies in Detecting Iridescient Viruses. S. L. BILIMORIA, A. J. PARKINSON, AND J. KALMAKOFF	133
Enhanced Detection of Western Equine Encephalitis Virus Plaque Variants in Crowded Cultures and Plaque Progeny—Potential Use in Genetic Studies. G. JOHN STANTON, DEBORAH CHARSHA MAY, AND S. C. DE ST. JEOR	145
Factors Influencing the Activity of Sterile Filtered and Heat-Sterilized Trypsin-Solutions. R. A. COOK AND G. M. POOLE	154
Improved Techniques for Staining and Enumerating Focus Formation in Viral Infectivity Assays. DONNIE J. SELF, KATHERINE F. PETTISS, AND DARELL D. BIGNER	156

Volume 28

Contents for August

Number 2

Environmental Microbiology and Ecology

Radiometric Method for the Detection of Coliform Organisms in Water. URIEL BACHRACH AND ZELILAH BACHRACH	169
Computer Program Designed to Follow Fluctuations in Microbial Populations and Its Application in a Study of Chesapeake Bay Microflora. JAMES D. OLIVER AND R. R. COLWELL	185
Quantitative Infrared Photoanalysis of Selected Bacteria. D. L. DUGAN AND D. N. WRIGHT	205
Microbial Decontamination of Parathion and <i>p</i> -Nitrophenol in Aqueous Media. DOUGLAS M. MUNNECKE AND DENNIS P. H. HSIEH	212
Hydrophobic Grid-Membrane Filters: New Approach to Microbiological Enumeration. A. N. SHARPE AND G. L. MICHAUD	223
Development of Methods for Detecting Viruses in Solid Waste Landfill Leachates. MARK D. SOBSEY, CRAIG WALLIS, AND JOSEPH L. MELNICK	232
Evolution of Dimethylselenide from Soils. A. J. FRANCIS, J. M. DUXBURY, AND M. ALEXANDER	248
Nutritional Features of <i>Bacteroides fragilis</i> subsp. <i>fragilis</i> . VINCENT H. VAREL AND MARVIN P. BRYANT	251
Rapid Method for the Radioisotopic Analysis of Gaseous End Products of Anaerobic Metabolism. DAVID R. NELSON AND J. G. ZEIKUS	258
Bacteriological Assessment of Spoon River Water Quality. SHUNDAR LIN, RALPH L. EVANS, AND DAVIS B. BEUSCHER	288
Recovery of <i>Escherichia coli</i> from Chlorinated Secondary Sewage. J. R. BRASWELL AND A. W. HOADLEY	328

Food Microbiology and Toxicology

Inhibition of Brewer's Yeasts by Wheat Purothionins. C. HERNANDEZ-LUCAS, R. FERNANDEZ DE CALEYA, AND PILAR CARBONERO	165
--	-----

Effect of Potassium Sorbate on <i>Salmonellae</i> , <i>Staphylococcus aureus</i> , <i>Clostridium perfringens</i> , and <i>Clostridium botulinum</i> in Cooked, Uncured Sausage. R. B. TOMPKIN, L. N. CHRISTIANSEN, A. B. SHAPARIS, AND H. BOLIN.....	262
Use of Microculture Plates and the Multiple Automated Sample Harvester for In Vitro Microassay of Bacterial Toxins. RICHARD C. KNUDSEN, LYNN T. CALLAHAN III, AFTAB AHMED, AND KENNETH W. SELL.....	326

Metabolism and Products

Liquid Scintillation Vial for Cumulative and Continuous Radiometric Measurement of In Vitro Metabolism. EDWARD U. BUDDMEYER.....	177
Growth Rates of a <i>Pseudomonad</i> on 2,4-Dichlorophenoxyacetic Acid and 2,4-Dichlorophenol. J. E. TYLER AND R. K. FINN.....	181
Storage of Stock Cultures of Filamentous Fungi, Yeasts, and Some Aerobic Actinomycetes in Sterile Distilled Water. M. R. MCGINNIS, A. A. PADHYE, AND L. AJELLO.....	218
Insensitivity of Homocitrate Synthase in Extracts of <i>Penicillium chrysogenum</i> to Feedback Inhibition by Lysine. PRAKASH S. MASUREKAR AND ARNOLD L. DEMAINE.....	265
Growth and Metabolic Characteristics of <i>Mycobacterium paratuberculosis</i> . R. S. MERKAL AND B. J. CURRAN.....	276
Critical-Point Drying: a Rapid Method for the Determination of Bacterial Extracellular Polymer and Surface Structures. GERALD D. CAGLE.....	312

Clinical Microbiology and Immunology

Evaluation of the Indirect Fluorescent-Antibody Technique for Identification of <i>Naegleria</i> Species. J. DE JONCKHEERE, P. VAN DIJCK, AND H. VAN DE VOORDE.....	159
Bacteriocin Susceptibility of <i>Clostridium perfringens</i> : a Provisional Typing Schema. D. E. MAHONY.....	172
<i>Nocardia caviae</i> : a Report of 13 New Isolations with Clinical Correlation. WILLIAM A. CAUSEY.....	193
Identification of Group B Streptococci by Immunofluorescence Staining. REDOLFO ROMERO AND HAZEL W. WILKINSON.....	199
Simplified Approach to Identification of Aerobic Actinomycetes by Thin-Layer Chromatography. JOSEPH L. STANECK AND GLENN D. ROBERTS.....	226
Evaluation of Four Blood Culture Systems Using Parallel Culture Methods. RICHARD ROSNER.....	245
Trichophytin Extraction: Biological Comparison of Trichophytin Extracted from <i>Trichophyton mentagrophytes</i> Grown in a Complex Medium and a Defined Medium. PAUL J. OTTAVIANO, HENRY E. JONES, JUNE JAEGER, ROBERT D. KING, AND DAVID BIBEL.....	271
Rapid Diagnosis of Infection by Gas-Liquid Chromatography: Analysis of Sugars in Normal and Infected Cerebrospinal Fluid. STANLEY AMUNDSON, ABRAHAM I. BRAUDE, AND CHARLES E. DAVIS.....	298
Hydrogen Sulfide-Producing Variants of <i>Escherichia coli</i> . MYRON D. MAKER AND JOHN A. WASHINGTON II.....	303
Detection of <i>Escherichia coli</i> Antigens by a Latex Agglutination Test. K. HECHERY, R. W. STEVENS, AND H. A. GAAFAR.....	306
Color-Coded Antigen for the Automated Reagin Test for Syphilis. S. S. KASATIYA AND N. G. LAMBERT.....	317
Reuse of <i>Salmonella</i> and <i>Shigella</i> Absorbing Cells for Preparing Monospecific <i>Salmonella</i> O and <i>Shigella</i> Antisera. SAMUEL B. GRAY, JR., JAMES H. GREEN, WILLIAM K. HARRELL, LOIS BRITT, AND RICHARD C. BOLIN.....	320
Paper-Strip Blood-Sampling Technique for the Detection of Antibody to the Plague Organism <i>Yersinia pestis</i> . KATHERINE L. WOLFF AND BRUCE W. HUDSON.....	323

Virology and Viral Immunology

Modified Radioimmunoassay for Murine Sarcoma-Leukemia Virus Group-Specific
--

Antigen. GAD SPIRA, NILAMBAR BISWAL, AND GORDON E. DREESMAN.....	239
Liquid Scintillation Radioassay in Disposable Microcentrifuge Tubes: Radioimmune Precipitates and Other Applications. F. L. SCHAFFER AND M. E. SOERGEL.....	280
Mouse Interferon in Ascitic Fluids. SONJA M. BUCKLEY AND JORDI CASALS.....	319
Erratum.....	330

Volume 28

Contents for September

Number 3

Environmental Microbiology and Ecology

Sterility of Salmonid Roe and Practicality of Hatching Gnotobiotic Salmonid Fish. T. J. TRUST.....	340
Sewage Treatment by Controlled Eutrophication: Bacterial Study. J. GLENN SONGER, RODNEY F. SMITH, AND N. M. TRIEFF.....	359
Thermoradiation Inactivation of Naturally Occurring Bacterial Spores in Soil. MARCEL C. REYNOLDS, KERMIT F. LINDELL, THOMAS J. DAVID, MARTIN S. FAVERO, AND WALTER W. BOND.....	406
8-Class-type Tallying Device and Counter. JAMES N. ADAMS.....	423
Studies on the Cecal Microflora of Commercial Broiler Chickens. J. P. SALANITRO, I. G. BLAKE, AND P. A. MUIRHEAD.....	439
Growth of Indigenous Organisms in Aerated Filtrate of Feedlot Waste. B. A. WEINER AND R. A. RHODES.....	448
Ice Nucleation Induced by <i>Pseudomonas syringae</i> . LEROY R. MAKI, ELIZABETH L. GALYAN, MEI-MON CHANG-CHIEN, AND DANIEL R. CALDWELL.....	456
Comparison of Autoclave and Ethylene Oxide-Sterilized Membrane Filters Used in Water Quality Studies. B. J. DUTKA, M. J. JACKSON, AND J. B. BELL.....	474
Sulfate Reduction by a <i>Desulfovibrio</i> Species Isolated from Sheep Rumen. JOELLEN HUISINGH, J. J. MCNEILL, AND G. MATRONE.....	489
Epoxy-Fiberglass Adsorbent for Concentrating Viruses from Large Volumes of Potable Water. WALTER JAKUBOWSKI, JOHN C. HOFF, NATHANIEL C. ANTHONY, AND WILLIAM F. HILL, JR.....	501
Quantitative Large-Volume Sampling Technique. M. A. LEVINE, J. R. FISCHER, AND V. J. CABELLI.....	515

Food Microbiology and Toxicology

Simultaneous Loss of Proteinase- and Lactose-Utilizing Enzyme Activities in <i>Strepto-</i> <i>coccus lactis</i> and Reversal of Loss by Transduction. L. L. MCKAY AND K. A. BALDWIN.....	342
Rice-Grown <i>Rhizopus oligosporus</i> Inoculum for Tempeh Fermentation. SIMON RUSMIN AND SWAN DJIEN KO.....	347
Malformin in <i>Aspergillus niger</i> -Infected Onion Bulbs (<i>Allium cepa</i>). ROY W. CURTIS, WALTER R. STEVENSON, AND JOHN TUIE.....	362
<i>Clostridium botulinum</i> Type E Toxin: Effect of pH and Method of Purification on Molecular Weight. HENRY S. SACKS AND SCOTT V. COVERT.....	374
Effect of Dissolved Oxygen, Temperature, Initial Cell Count, and Sugar Concentration on the Viability of <i>Saccharomyces cerevisiae</i> in Rapid Fermentations. TILAK W. NAGODAWITHANA, CARMINE CASTELLANO, AND KEITH H. STEINKRAUS.....	383
Development of a Selective Enterococcus Medium Based on Manganese Ion De- ficiency, Sodium Azide, and Alkaline pH. C. J. EFTHYMIU AND S. W. JOSEPH..	411
Improved Isolation and Differentiation of Enterococci in Cheese. C. J. EFTHYMIU, P. BACCASH, V. J. LABOMBARDI, AND D. S. EPSTEIN.....	417
Selecting Lysine-Excreting Mutants of Lactobacilli for Use in Food and Feed En- richment. D. C. SANDS AND LESTER HANKIN.....	523

Metabolism and Products

Formations of Extracellular Isoamylase and Intracellular α -Glucosidase and Amylase(s) by <i>Pseudomonas</i> SB15 and a Mutant Strain. TOSHIYUKI SUGIMOTO, AKINORI AMEMURA, AND TOKUYA HARADA	336
Radiometric Measurement of Metabolic Activity of <i>Mycobacterium lepraemurium</i> . EDWALDO E. CAMARGO, STEVEN M. LARSON, BYRON S. TEPPER, AND HENRY N. WAGNER, JR.	452
Degradation of Oil Shale by Sulfur-Oxidizing Bacteria. J. FINDLEY, M. D. APPLEMAN, AND T. F. YEN	460
Simple Method for Preparation of Homogeneous Spore Suspensions Useful in Industrial Strain Selection. S. W. QUEENER AND J. J. CAPONE	498
Gas-Tight Flask for the Concurrent Measurement of Gas Metabolism and Growth in Methane-Oxidizing Bacteria. ELAINE F. MUNOZ AND MELVIN P. SILVERMAN ..	507

Clinical Microbiology and Immunology

Characterization and Differentiation of 59 Strains of <i>Moraxella urethralis</i> from Clinical Specimens. P. S. RILEY, D. G. HOLLIS, AND R. E. WEAVER	355
Indirect Hemagglutinating Antibody Response to <i>Herpesvirus hominis</i> Types 1 and 2 in Immunized Laboratory Animals and in Natural Infections of Man. ARTHUR F. BACK AND NATHALIE J. SCHMIDT	392
Evaluation of the Gonosticon Dri Dot Test in Females with a Low Incidence of Gonorrhea. JOHN D. DYCKMAN, REUBEN D. WENDE, AND ROBERT P. WILLIAMS ..	431
Comparison of the BACTEC System with Blind Subculture for the Detection of Bacteremia. M. CASLOW, P. D. ELLNER, AND T. E. KIEHN	435
Effect of a Synthetic Dressing Formed on a Burn Wound in Rats: a Comparison of Allografts, Collagen Sheets, and Polyhydroxyethylmethacrylate in the Control of Wound Infection. PAUL NATHAN, BRUCE G. MACMILLAN, AND IAN A. HOLDER ..	465
Survey on the Incidence of <i>Yersinia enterocolitica</i> Infection in Canada. S. TOMA AND LUCETTE LAFLEUR	469
Origin and Structure of the Group-Specific, Complement-Fixing Antigen of <i>Rickettsia rickettsii</i> . T. TZIANABOS, E. L. PALMER, J. F. OBJESKI, AND M. L. MARTIN	481
Contamination of Bacteriological Media by <i>Leptospira biflexa</i> . J. J. BRENDLE AND A. D. ALEXANDER	505
Distribution of <i>Serratia</i> Species in Clinical Specimens. ERIOUS JOHNSON AND PAUL D. ELLNER	513
Modification of Tergitol-7 Agar for Differentiation of Hydrogen Sulfide-Producing Colonies. D. B. HINDS AND A. T. HOWARD	521

Virology and Viral Immunology

Stability of Minute Virus of Mice to Chemical and Physical Agents. ROBERT E. HARRIS, PHILIP H. COLEMAN, AND PAGE S. MORAHAN	351
Evaluation of a Plaque Assay for the Maedi-Progressive Pneumonia-Visna Viruses. R. S. TROWBRIDGE	366
Typing <i>Herpesvirus hominis</i> Antibodies and Isolates by Inhibition of the Indirect Hemagglutination Reaction. ARTHUR F. BACK AND NATHALIE J. SCHMIDT	400
Improved Rapid Plate Method for the Isolation of Bacteriophages from Lysogenic Bacteria. JOSEPH T. PARISI AND HENRY W. TALBOT, JR.	503
Determination of Genome Size of Selected Typing Bacteriophages of <i>Staphylococcus aureus</i> . MICHAEL W. PARIZA AND JOHN J. IANDOLO	510
Epstein-Barr Virus from P3HR-1 Cells Grown in Chemically Defined Medium. STANLEY C. NAGLE AND BRUCE L. BROWN	518

Disinfectants

Temperature-Induced Changes in the Sporicidal Activity and Chemical Properties of Glutaraldehyde. S. THOMAS AND A. D. RUSSELL	331
---	-----

Environmental Microbiology and Ecology

- Automated Count and Size Evaluation of Colonies of Bacteria Grown in a Zonal Concentration Gradient of Antimicrobial Agent. E. YOURASSOWSKY AND E. SCHOUTENS. 525
- Effect of Four Dispersants on Biodegradation and Growth of Bacteria on Crude Oil. G. J. MULKINS-PHILLIPS AND JAMES E. STEWART. 547
- Sorption of Heterotrophic and Enteric Bacteria to Glass Surfaces in the Continuous Culture of River Water. CHARLES W. HENDRICKS. 572
- Isolation of Ureolytic *Peptostreptococcus productus* from Feces Using Defined Medium; Failure of Common Urease Tests. V. H. VAREL, M. P. BRYANT, L. V. HOLDEMAN, AND W. E. C. MOORE. 594
- Statistical Analysis of the Recovery of Coliform Organisms on Gelman and Millipore Membrane Filters. DAVID J. SCHAEFFER, MAXINE C. LONG, AND KONANUR G. JANARDAN. 605
- Acetylene Reduction (Nitrogen Fixation) by Pulp and Paper Mill Effluents and by *Klebsiella* Isolated from Effluents and Environmental Situations. R. KNOWLES, R. NEUFELD, AND S. SIMPSON. 608
- Bacillus stearothermophilus* in Soils of Iceland. M. L. FIELDS AND P. P. CHEN LEE. . . . 638
- Clostridium perfringens* in the Environment. JACK R. MATCHES, JOHN LISTON, AND DONALD CURRAN. 655
- Microbial Response to Drought in a Texas Highplains Shortgrass Prairie. D. W. THAYER. 700
- Isolation of *Salmonella enteritidis* Serotype Agona from Eutrophic Regions of a Freshwater Lake. W. L. COOK, R. A. CHAMPION, AND D. G. AHEARN. 723

Food Microbiology and Toxicology

- Production of Patulin by *Penicillium expansum*. NOEL F. SOMMER, JACK R. BUCHANAN, AND ROBERT J. FORTLAGE. 589
- Staphylococcal Enterotoxin B and Nuclease Production Under Controlled Dissolved Oxygen Conditions. DAVID F. CARPENTER AND GERALD J. SILVERMAN. 628
- Identification of Major High-Boiling Volatile Compounds Produced During Refrigerated Storage of Haddock Fillets. T. C. CHEN, W. W. NAWAR, AND R. E. LEVIN. 679
- Taxonomic Significance of Phenethyl Alcohol Production by *Achromobacter* Isolates from Fishery Sources. T. C. CHEN AND R. E. LEVIN. 681
- Incidence of *Clostridium botulinum* in Crabmeat from the Blue Crab. DONALD A. KAUTTER, TIMOTHY LILLY, JR., ARMAND J. LEBLANC, AND RICHARD K. LYNT. . . . 722

Metabolism and Products

- Biology of *Borrelia hermsii* in Kelly Medium. HERBERT G. STOENNER. 540
- Production of Hormone B by *Achlya heterosexalis*. ALMA W. BARKSDALE AND LINDA L. LASURE. 544
- Nalidixic Acid for Enrichment of Auxotrophs in Cultures of *Salmonella typhimurium*. R. M. WEINER, M. J. VOLLI, AND T. M. COOK. 579
- Carotenoid Pigments of *Mycobacterium kansasii*. HUGO L. DAVID. 696

Clinical Microbiology and Immunology

- Flat Gel Polyacrylamide Electrophoresis of Porcine Mycoplasmas. T. G. WREGHITT, G. D. WINDSOR, AND M. BUTLER. 530
- Combined Biochemical and Serological Typing of Clinical Isolates of *Klebsiella*. R. P. RENNIE AND I. B. R. DUNCAN. 534
- Non-Immunological Precipitation of Serum by Sodium Dodecyl Sulfate in Agar Diffusion. C. T. CHO AND K. K. FENG. 557

Determination of <i>Bacteroides melaninogenicus</i> Serogroups by Fluorescent Antibody Staining. DWIGHT W. LAMBE, JR.	561
Monitoring the Atmosphere in an Anaerobic Chamber. SARA Z. SUDO AND PAUL A. HERSCH.	582
Rapid Method of Determining Cholera Vibrio Biotype. P. MACKOWIAK AND IMBADUL HUQ.	586
Identification of <i>Salmonella</i> with the O-1 Bacteriophage. SUSAN WELKOS, MINNIE SCHREIBER, and HERMAN BAER.	618
Value of the Concomitant Use of Complement Fixation and Immunodiffusion Tests in the Diagnosis of Coccidioidomycosis. LEO KAUFMAN AND MAXINE J. CLARK.	641
Comparison of Macroscopic, Microscopic, and Radiometric Examinations of Clinical Blood Cultures in Hypertonic Media. RICHARD ROSNER.	644
Modified Laminar Flow Biological Safety Cabinet. GERALD J. MCGARRITY AND LEWIS L. CORIELL.	647
Adhesive Tape: Potential Source of Nosocomial Bacteria. DAVID M. BERKOWITZ, WIE-SHING LEE, GEORGE J. PAZIN, ROBERT B. YEE, and MONTA HO.	651
Evaluation of the Minitek System for Identification of <i>Enterobacteriaceae</i> . T. E. KIEHN, K. BRENNAN, and P. D. ELLNER.	668
Characterization of <i>Klebsiella</i> Isolates from Natural Receiving Waters and Comparison with Human Isolates. JOHN M. MATSEN, JOYCE A. SPINDLER, and RUSSELL O. BLOSSER.	672
Comparison of Media for the Isolation of <i>Haemophilus</i> Species from Cases of Seasonal Conjunctivitis Associated with Sever Endemic Trachoma. DAVID W. VASTINE, CHANDLER R. DAWSON, ISAO HOSHIWARA, CHIEKO YONEDA, TOUFIQUE DAGHOUS, and MOHAMMED MESSADI.	688
Mathematical Analysis of the API Enteric 20 Profile Register Using a Computer Diagnostic Model. E. ARTHUR ROBERTSON and JAMES D. MACLOWRY.	691
Ultrastructure of the Surface of <i>Rickettsia prowazeki</i> and <i>Rickettsia akari</i> . ERSKINE L. PALMER, MARY L. MARTIN, and LOUIS MALLAVIA.	713
Acetamide Agar for Differentiation of Nonfermentative Bacteria. THOMAS R. OBERHOFER and JOYCE W. ROWEN.	720
Micro Cell Culture Method for Isolation of <i>Chlamydia trachomatis</i> . DOROTHY E. MCCOMB and CONSTANCE I. PUZNIAK.	727
Tube Culture Method for Viable Counts of <i>Campylobacter fetus</i> (<i>Vibrio fetus</i>). MARYON M. BORDER, B. D. FIREHAMMER, and L. L. MYERS.	730

Virology and Viral Immunology

Microadaptation of Hemadsorption Inhibition for Neutralization Tests with Pig Hemagglutinating Encephalomyelitis Virus. K. J. SØRENSEN.	553
Rapid Typing of Herpes Simplex Virus Strains Using the Indirect Immunoperoxidase Method. DENIS R. BENJAMIN.	568
Specificity and Sensitivity of Radioimmunoassay for Hepatitis B Antigen. GILBERT R. IRWIN, ALFRED M. ALLEN, WILLIAM H. BANCROFT, MILTON WILLHIGHT, and PHILIP K. RUSSELL.	600
Sensitive In Vivo Assay for Detection of Murine Leukemia Viruses. ROBERT L. PETERS, GERARD J. SPAHN, LOUISE S. RABSTEIN, ROBERT J. HUEBNER, and GARY J. KELLOFF.	614
Serotyping of Adenoviruses Using Immune Electron Microscopy. JOHN H. VASSALL II and C. GEORGE RAY.	623
Solid Phase Radioimmunoassay for Identification of <i>Herpesvirus hominis</i> Types 1 and 2 from Clinical Materials. BAGHER FORGHANI, NATHALIE J. SCHMIDT, and EDWIN H. LENNETTE.	661
Concentration of Enteric Viruses from Water with Lettuce Extract. J. KONOWALCHUK, J. I. SPEIRS, R. D. PONTEFRACT, and G. BERGERON.	717
Ehrlich Ascites Tumor Preservation for Fifteen Years—a Simple Method. WILLIAM A. CASSEL and KATHY M. MCCASKILL.	726
<i>Penicillium stoloniferum</i> Virus: Large-Scale Concentration and Purification by Polyethylene Glycol. R. W. DETROY and P. E. STILL.	733

Methods

- Specimen Holder to Critical-Point Dry Microorganisms for Scanning Electron Microscopy. C. P. KURTZMAN, F. L. BAKER, AND J. J. SMILEY 708

Volume 28

Contents for November

Number 5

Environmental Microbiology and Ecology

- Test Method for the Evaluation of Virucidal Efficacy of Three Common Liquid Surface Disinfectants on a Simulated Environmental Surface. J. W. GAUSTAD, C. R. McDUFF, AND H. J. HATCHER 748
- Effects of Seawater Cations and Temperature on Manganese Dioxide-Reductase Activity in a Marine *Bacillus*. W. C. GHORSE AND H. L. EHRLICH 785
- Fermentation of Feedlot Waste Filtrate by Fungi and Streptomycetes. B. A. WEINER AND R. A. RHODES 845
- Direct Method for Continuous Determination of Iron Oxidation by Autotrophic Bacteria. MICHAEL STEINER AND NORMAN LAZAROFF 872
- Rickettsia-Like Organism Causing Disease in a Crangonid Amphipod from Florida. BRIAN A. FEDERICI, EDWIN I. HAZARD, AND DARRELL W. ANTHONY 885
- Simplified Method for the Preparation of Silica Gel Media. ROBERT C. THATCHER AND TERRY L. WEAVER 887
- Persistence of Enteroviruses in Lake Water. JOHN E. HERRMANN, KENNETH D. KOSTENBADER, JR., AND DEAN O. CLIVER 895

Food Microbiology and Toxicology

- Characterization of Lac⁺ Transductants of *Streptococcus lactis*. T. A. MOLSKNESS, W. E. SANDINE, AND L. R. BROWN 753
- Aspergillus flavus* Infection and Aflatoxin Production in Corn: Influence of Trace Elements. E. B. LILLEHOJ, W. J. GARCIA, AND M. LAMBROW 763
- Recovery of Heated *Clostridium perfringens* Type A Spores on Selective Media. J. T. BARACH, D. M. ADAMS, AND M. L. SPECK 793
- Response of Ligated Intestinal Loops in Chickens to the Enterotoxin of *Clostridium perfringens*. L. NILO 889

Metabolism and Products

- Identification of *n*-Decane Oxidation Products in *Corynebacterium* Cultures by Combined Gas Chromatography-Mass Spectrometry. PAOLO BACCHIN, ANDREA ROBERTIELLO, AND AURELIO VIGLIA 737
- Submerged Production, Purification, and Crystallization of Acid Carboxypeptidase from *Penicillium janthinellum* IFO-8070. SADAJI YOKOYAMA, AKIRA OOBAYASHI, OSAMU TANABE, AND EIJI ICHISHIMA 742
- Cold Shock Lethality and Injury in *Clostridium perfringens*. P. A. TRACI AND C. L. DUNCAN 815
- Diauxic Growth of *Protonibacterium shermanii*. INN HEE LEE, A. G. FREDRICKSON, AND H. M. TSUCHIYA 831
- Toxicity of Short-Chain Fatty Acids and Alcohols Towards *Cladosporium resinae*. J. S. TEH 840
- Growth of *Bacteroides fragilis* in Continuous Culture and in Batch Cultures at Controlled pH. ELI DALLAND AND T. HOFSTAD 856
- Formation of Diketopiperazines by *Penicillium italicum* Isolated from Oranges. PETER M. SCOTT, BARRY P. C. KENNEDY, JOOST HARWIG, AND Y-K. CHEN 892

Clinical Microbiology and Immunology

- Rapid Methods for Biochemical Testing of Anaerobic Bacteria. PAUL C. SCHRECKENBERGER AND DONNA J. BLAZEVIC 759

Differentiation of Staphylococcal and Micrococcal Proteinases by Electrophoresis. R. K. SCHERER AND R. W. BROWN.....	768
Parabiotic Chamber for Organ Cultures: Improved Model. MICHAEL G. GABRIDGE..	774
In-Use Contamination of Intravenous Infusion Fluid. DENNIS G. MAKI, ROGER L. ANDERSON, AND JONAS A. SHULMAN.....	778
Evaluation of the BBL Minitest System for the Identification of <i>Enterobacteriaceae</i> . S. L. HANSEN, D. R. HARDESTY, AND B. M. MYERS.....	798
Corynebacterial Kidney Disease of Salmonids: Growth and Serological Studies on the Causative Bacterium. G. L. BULLOCK, H. M. STUCKEY, AND P. K. CHEN.....	811
Factors That Influence Microbial Contamination of Fluids Associated with Hemo- dialysis Machines. MARTIN S. FAVERO, LORETTA A. CARSON, WALTER W. BOND, AND NORMAN J. PETERSEN.....	822
Simplified Extraction Procedure for Serological Grouping of Beta-Hemolytic Strepto- cocci. AZIZ EL KHOLY, RICHARD M. KRAUSE, AND LEWIS W. WANNAMAKER....	836
Fluorescent Antibody Study of the Gram-Positive Anaerobic Cocci. RICHARD K. PORSCHEN AND EARLE H. SPAULDING.....	851
Investigations on the Specificity of the Limulus Test for the Detection of Endotoxin. ALEXANDER WILDFEUER, BERNO HEYMER, KARL H. SCHLEIFER, AND OTTO HAFERKAMP.....	867
Rapid Detection of Bovine Mycoplasma Antigens by Counterimmunoelectrophoresis. HYUN J. CHO AND EDGAR V. LANGFORD.....	897

Virology and Viral Immunology

Microculture Plaque Neutralization Test for California-Group Arboviruses. GARY L. SEAWRIGHT, GHERRY HARDING, FREDERICK C. THOMAS, AND ROBERT P. HANSON..	802
Diagnosis of California (La Crosse) Encephalitis by Precipitin Techniques: a Prospec- tive Study. HENRY H. BALFOUR, JR., AND CHARLENE K. EDELMAN.....	807
Virulence of Venezuelan Equine Encephalomyelitis Virus Subtypes for Various Lab- oratory Hosts. CHARLES H. CALISHER AND KATHRYN S. C. MANESS.....	881

Disinfectants

Chemical Disinfection of Holding-Tank Sewage. MARK D. SOBSEY, CRAIG WALLIS, AND JOSEPH L. MELNICK.....	861
---	-----

Volume 28

Contents for December

Number 6

Environmental Microbiology and Ecology

Effect of Environmental Parameters on Bacterial Degradation of Bunker C Oil, Crude Oils, and Hydrocarbons. G. J. MULKINS-PHILLIPS AND JAMES E. Stew- art.....	915
Modified Spinning Top Homogeneous Spray Apparatus for Use in Experimental Respiratory Disease Studies. HAROLD W. YOUNG, EDGAR W. LARSON, AND JOSEPH W. DOMINIK.....	929
<i>Arthrobacter globiformis</i> and Its Bacteriophage in Soil. L. E. CASIDA, JR., AND KANG-CHIEN LIU.....	951
Microbial Metabolism and Dynamic Changes in the Electrical Conductivity of Soil Solutions: a Method for Detecting Extraterrestrial Life. MELVIN P. SILVERMAN AND ELAINE F. MUNOZ.....	960
Effect of Hydrostatic Pressure on Growth and Viability of <i>Vibrio parahaemolyticus</i> . J. R. SCHWARZ AND R. R. COLWELL.....	977
Deep-Sea Bacteria: Growth and Utilization of Hydrocarbons at Ambient and In Situ Pressure. J. R. SCHWARZ, J. D. WALKER, AND R. R. COLWELL.....	982
Agricultural Plants and Soil as a Reservoir for <i>Pseudomonas aeruginosa</i> . SYLVIA K. GREEN, MILTON N. SCHROTH, JOHN J. CHO, SPYROS D. KOMINOS, AND VILMA B. VITANZA-JACK.....	987

Biodegradation of Cyanuric Acid. JEROME SALDICK.....	1004
Distribution of <i>Vibrio parahaemolyticus</i> and Related Organisms in the Atlantic Ocean off South Carolina and Georgia. TATSUO KANEKO AND RITA R. COLWELL....	1009
Nutritional Features of the Intestinal Anaerobe <i>Ruminococcus bromii</i> . JANICE L. HERBECK AND M. P. BRYANT.....	1018
Membrane Concentration of Infectious Bovine Rhinotracheitis Virus from Water. S. R. TSCHIDER, D. L. BERRYHILL, AND I. A. SCHIPPER.....	1030
Ecological Application of Antibiotics as Respiratory Inhibitors of Bacterial Populations. J. E. YETKA AND W. J. WIEBE.....	1033
Growth and Reproduction of Microorganisms Under Extremely Alkaline Conditions. K. A. SOUZA, P. H. DEAL, H. M. MACK, AND C. E. TURNBILL.....	1066
Method for In Situ Measurement of Nitrification in a Stream. DAVID P. SCHWERT AND JAMES P. WHITE.....	1082
Microbial Degradation of High-Molecular-Weight Alkanes. J. R. HAINES AND M. ALEXANDER.....	1084
Evaluation of Selective Media for Enumeration of Group D Streptococci in Bovine Feces. R. W. SWITZER AND JAMES B. EVANS.....	1086

Food Microbiology and Toxicology

Purification of <i>Clostridium botulinum</i> Type F Progenitor Toxin. IWAQ OHISHI AND GENJI SAKAGUCHI.....	923
Detecting the Enterotoxicity of <i>Staphylococcus aureus</i> Strains. RUTH ROBBINS, SARA GOULD, AND MERLIN BERGDOLL.....	946
Further Characterization of Tissue Distribution and Metabolism of [¹⁴ C]Aflatoxin B ₁ in Chickens. JOHN R. CHIPLEY, MICHAEL S. MABEE, KENNETH L. APPLEGATE, AND MARK S. DREYFUSS.....	1027
Periplasmic Structure in <i>Saccharomyces rouxii</i> (Boutroux), an Osmophil. WILFRED N. ARNOLD, ROBERT G. GARRISON, AND KAREN S. BOYD.....	1047
Technique for Preparing High-Quality Microphotographs by Fluorescence Microscopy. J. G. ELLIOT, J. A. CARPENTER, AND M. K. HAMDY.....	1063
Recovery of <i>Lactobacillus bulgaricus</i> and <i>Streptococcus thermophilus</i> on Nine Commonly Used Agar Media. NANCY J. MOON, A. C. HAMANN, AND G. W. REINBOLD..	1076
Antagonism of Lactic Streptococci Toward <i>Staphylococcus aureus</i> in Associative Milk Cultures. S. E. GILLILAND AND M. L. SPECK.....	1090
Toxicogenic Aspergilli and Penicillia Isolated from Aged, Cured Meats. M. T. WU, J. C. AYRES, AND P. E. KOEHLER.....	1094

Metabolism and Products

Continuous Culture Used for Media Optimization. R. I. MATELES AND E. BATTAT.	901
Growth of <i>Pseudomonas</i> C on C ₁ Compounds: Continuous Culture. E. BATTAT, I. GOLDBERG, AND R. I. MATELES.....	906
Microbial Transformation of Methyl 5(6)-Butyl-2-Benzimidazolecarbamate. J. R. VALENTA, C. J. DICUOLLO, L. R. FARE, J. A. MILLER, AND J. F. PAGANO.....	995
Culture of <i>Clostridium pasteurianum</i> in Defined Medium and Growth as a Function of Sulfate Concentration. M. F. MALLETT, PAUL REECE, AND E. A. DAWES.	999
Quantitation of the Tetramethyl-p-Phenylenediamine Oxidase Reaction in <i>Neisseria</i> Species. PETER JURTSCHUK AND THOMAS W. MILLIGAN.....	1079
Comparison of the Sphingolipid Content of Rumen <i>Bacteroides</i> Species. JOSEPH E. KUNSMAN AND DANIEL R. CALDWELL.....	1088

Clinical Microbiology and Immunology

Growth of <i>Chlamydia trachomatis</i> in McCoy Cells Treated with Cytochalasin B. DAVID SOMPOLINSKY AND SHIRLEY RICHMOND.....	912
Criteria for Preparing, Evaluating, and Standardizing Iodinated Globulins for Radioimmunoassay Procedures. HARRIET D. HUTCHINSON AND DONALD W. ZIEGLER.	935
Primary Isolation of <i>Mycobacterium chelonae</i> Subspecies <i>abscessus</i> from Pus Inoculated	

CONTENTS

xxv

into Peptone Broth. JULIA CROWLEY, PAUL I. LIU, AND ARMAND B. GLASSMAN.	943
New Method of Grouping Beta-Hemolytic Streptococci Directly on Sheep Blood Agar Plates by Coagglutination of Specifically Sensitized Protein A-Containing Staphylococci. E. A. EDWARDS AND G. L. LARSON.	972
Factors Affecting the Sensitivity of <i>Limulus</i> Lysate. JAMES D. SULLIVAN, JR., AND STANLEY W. WATSON.	1023
Observation of Nitrate Reduction in Some Non-Saccharolytic Strains of <i>Acinetobacter</i> . P. S. RILEY AND R. E. WEAVER.	1071
Latex Test for Quantitative Determination of <i>Escherichia coli</i> Antibody. KARIM HECHERY, ROY STEVENS, JEAN SROKA, AND HASSAN GAAFAH.	1073

Virology and Viral Immunology

Automated Microtransfer Technique for the Assay of Poliovirus- and Mumps Virus-Neutralizing Antibodies. RONALD E. MAYNER, DONALD J. McDORMAN, BARBARA C. MEYER, AND PAUL D. PARKMAN.	968
Rubella Hemagglutination Inhibition: Removal of Nonspecific Agglutination Due to Manganous Chloride. S. A. BIANO, TE WEN CHANG, AND J. B. DANIELS.	992
In Vitro System for Production of Mouse Mammary Tumor Virus. D. L. FINE, L. O. ARTHUR, J. K. PLOWMAN, E. A. HILLMAN, AND F. KLEIN.	1040
Growth of Foot-and-Mouth Disease Virus in the Different Layers of Bovine Omasum in Suspended Cultures. BEN-AMI PELEG AND NILY RON.	1055

Disinfectants

Propylene Oxide as Sterilizing Agent. A. HART AND M. W. BROWN.	1069
--	------